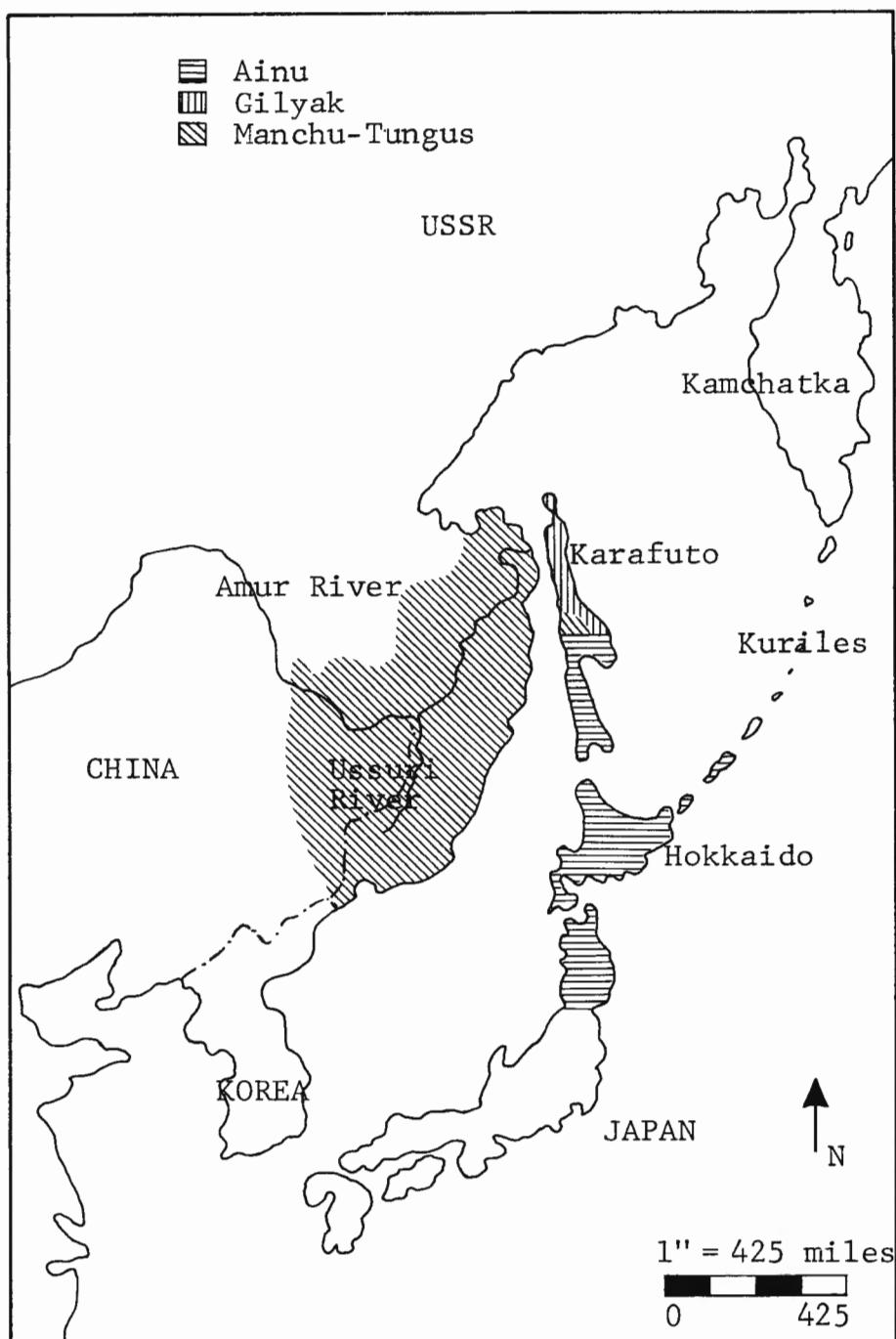


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The Genetic Relationship of the Ainu Language

James Patrie

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Map. 1 Northeast Asia

THE GENETIC RELATIONSHIP OF THE
AINU LANGUAGE

James Patrie
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TABLE OF CONTENTS

| | |
|--|------|
| List of Illustrations and Map | viii |
| Language Abbreviations | ix |
| Foreword | xi |
| Chapter 1: INTRODUCTION | 1 |
| 1.0 Background | 1 |
| 1.1 Linguistic Investigation of the Ainu. | 2 |
| 1.2 Genetic Affiliation of the Ainu | |
| Language | 3 |
| 1.2.1 Ainu and Japanese | 3 |
| 1.2.2 Indo-European Hypothesis | 4 |
| 1.2.3 Austronesian Hypothesis | 5 |
| 1.2.4 Paleosiberian Hypothesis | 6 |
| 1.2.5 Altaic Hypothesis | 6 |
| 1.3 Statement of Purpose | 10 |
| Notes | 13 |
| Chapter 2: PHONOLOGICAL EVIDENCE RELATING AINU AND ALTAIC | 15 |
| 2.0 Introduction | 15 |
| 2.1 Proto-Altaic Initial /p-/ | 15 |
| 2.2 Proto-Altaic Initial /t-/ | 20 |
| 2.3 Proto-Altaic Initial /k-/ | 23 |
| 2.4 Proto-Altaic Initial /b-/ | 28 |
| 2.5 Proto-Altaic Initial /d-/ and /j-/ | 30 |
| 2.6 Proto-Altaic Initial /g-/ | 33 |
| 2.7 Proto-Altaic Initial /s-/ | 34 |
| 2.8 Proto-Altaic Initial /ʃ-/ | 38 |
| 2.9 Proto-Altaic Initial /y-/ | 40 |
| 2.10 Proto-Altaic Initial /m-/ | 41 |
| 2.11 Proto-Altaic Initial /n-/ | 42 |
| 2.12 Proto-Altaic Initial /ŋ-/ | 44 |
| 2.13 Proto-Altaic Liquids | 44 |
| 2.14 Proto-Altaic Vowels | 49 |
| 2.14.1 pA /a-/ | 49 |
| 2.14.2 pA /i-/ | 50 |
| 2.14.3 pA /u-/ | 51 |
| 2.14.4 pA /e-/ | 52 |
| 2.14.5 pA /o-/ | 53 |
| 2.15 Proto-Altaic Non-initial Consonants | 53 |
| 2.16 Summary of Correspondences | 54 |
| Notes | 55 |

| | | |
|------------|--|-----|
| Chapter 3: | MORPHOLOGICAL AND LEXICAL EVIDENCE RELATING AINU AND ALTAIC | 56 |
| 3.1. | Interrogatives | 56 |
| 3.1.1 | Ainu Interrogatives | 56 |
| 3.1.2 | Proto-Altaic Interrogative Markers | 56 |
| 3.1.3 | Indefinite Interrogatives | 58 |
| 3.2 | Plural Formation | 61 |
| 3.3 | Class Particles | 61 |
| 3.3.1 | Locatives | 61 |
| 3.3.2 | Instrumental | 62 |
| 3.3.3 | Ablative/Dative | 62 |
| 3.4 | Numerals | 62 |
| Notes | | 68 |
| Chapter 4: | EVIDENCE RELATING KOREAN, JAPANESE, AND AINU | 69 |
| 4.0 | Introduction | 69 |
| 4.1 | *p- | 70 |
| 4.2 | *R- ?? | 74 |
| 4.3 | *t- | 79 |
| 4.4 | *c- | 81 |
| 4.5 | *čY- | 82 |
| 4.6 | *ʃ- | 83 |
| 4.7 | *pč- ?? | 83 |
| 4.8 | *pX- | 85 |
| 4.9 | *s- | 85 |
| 4.10 | *tsY- ?? | 88 |
| 4.11 | *S ₁ - | 89 |
| 4.12 | *S ₂ - | 90 |
| 4.13 | *k- | 91 |
| 4.14 | *K ₁ - | 95 |
| 4.15 | *m- | 96 |
| 4.16 | *b- ?? | 99 |
| 4.17 | *w- | 100 |
| 4.18 | *n- | 101 |
| 4.19 | *r- | 104 |
| 4.20 | *y- | 104 |
| 4.21 | *a- | 106 |
| 4.22 | *e- | 108 |
| 4.23 | *i- | 108 |
| 4.24 | *o- | 109 |
| 4.25 | *u- | 109 |
| 4.26 | Summary of Findings | 111 |
| 4.27 | Breakdown of Correspondences | 112 |
| 4.28 | Conclusions | 113 |
| Chapter 5: | CONCLUSIONS AND IMPLICATIONS | 114 |
| 5.1 | Introduction | 114 |
| 5.2 | Areas for Further Study | 120 |
| Notes | | 123 |

| | |
|---|-----|
| APPENDIX: A GRAMMATICAL SKETCH OF AINU | 124 |
| 6.0 Introduction | 124 |
| 6.1 Folklore and Speech Styles | 124 |
| 6.2 Ainu Phonology | 125 |
| 6.2.1 Phonemes | 125 |
| 6.2.2 Allophonic Variants | 126 |
| 6.2.3 Syllable Structure | 126 |
| 6.2.4 Permissible Open Syllables | 126 |
| 6.2.5 Morphophonemics | 127 |
| 6.2.6 Accent and Tone | 128 |
| 6.2.7 Vowel Harmony | 130 |
| 6.3 Lexical Composition | 130 |
| 6.4 Nouns | 131 |
| 6.4.1 Gender | 131 |
| 6.4.2 Number | 131 |
| 6.4.3 Case | 132 |
| 6.4.3.1 Unmarked forms | 132 |
| 6.4.3.2 /ta/ | 133 |
| 6.4.3.3 /or(o)/, /(or)wa(no)/ | 134 |
| 6.4.3.4 /tura(no)/ | 134 |
| 6.4.3.5 /pak(no)/ | 135 |
| 6.4.3.6 /ari/-/ani/ | 135 |
| 6.4.3.7 /-(h)V/ | 135 |
| 6.4.3.8 /kasuno/, /akkari/ | 137 |
| 6.5 Verbs | 138 |
| 6.5.1 Verb Inflection for Person | 138 |
| 6.5.2 Verb Inflection for Number | 138 |
| 6.5.3 Verb Tense | 141 |
| 6.6 Adjectives | 141 |
| 6.7 Pronouns | 141 |
| 6.8 Sentence and Clause Final Particles | 141 |
| 6.9 Derivations | 143 |
| 6.9.1 Verb Derivations | 143 |
| 6.9.1.1 Causativization | 143 |
| 6.9.1.2 Reflexivization | 145 |
| 6.9.1.3 Reciprocal Formations | 146 |
| 6.9.1.4 Passivization | 147 |
| 6.9.1.5 Derived Verbs | 147 |
| 6.9.2 Nominalizations | 148 |
| 6.9.3 Adjective Derivations | 150 |
| 6.9.4 Adverb Derivations | 152 |
| 6.10 Numerals | 153 |
| 6.11 Sentence Types | 154 |
| 6.11.1 Imperative | 154 |
| 6.11.2 Negative | 155 |
| 6.11.3 Interrogative | 156 |
| Notes | 157 |
| BIBLIOGRAPHY | 159 |
| INDEX OF AINU FORMS | 166 |

ILLUSTRATIONS

| | | |
|-----------|--|----|
| Figure 1. | The Altaic Family Tree | 8 |
| Figure 2. | Altaic Hypothesis of Street (1962) . . . | 11 |
| Figure 3. | Proto-Altaic Liquids | 45 |

LANGUAGE ABBREVIATIONS

| | |
|--------|----------------------------|
| alt. | Altai Turkic |
| AT | Old Turkish |
| az. | Azerbaijani |
| bar. | Baraba |
| baš. | Bashkir |
| bur. | Buriat |
| cag. | Chagatai |
| chuv. | Chuvash |
| dag. | Dagur |
| ew. | Evenki |
| go. | Goldi (Nanai) |
| jpnse. | Japanese |
| kalm. | Kalmuck |
| karak. | Karakalpak |
| kas. | Kazakh |
| kh. | Khalkha |
| kha. | Khakas |
| kir. | Kirghiz |
| ko. | Korean |
| koib. | Koibal |
| küär. | Küärik |
| kum. | Kuman |
| lam. | Lamut |
| leb. | Lebed |
| ma. | Manchu |
| mko. | Middle Korean |
| mmo. | Middle Mongolian |
| mng. | Monguor |
| mo. | Mongolian |
| mong. | Written Mongolian |
| mtk. | Middle Turkish |
| nko. | North Korean (Modern) |
| oir. | Oirat |
| oj. | Old Japanese |
| ok. | Old Korean |
| ol. | Olcha |
| ord. | Ordos |
| oroč. | Orochi |
| osm. | Osmanli |
| pA | Proto-Altaic |
| pKJ | Proto-Korean-Japanese |
| pKJA | Proto-Korean-Japanese-Ainu |
| sag. | Saga |
| šor. | Schori |
| tat. | Tatar |
| tel. | Teleut |
| tk. | Turkish |
| tkc. | Turkic |

| | |
|-------|----------|
| tkm. | Turkmen |
| tung. | Tungus |
| tuv. | Tuvinian |
| uig. | Uigur |
| yak. | Yakut |

FOREWORD

This work investigates the genetic relationship of the Ainu language. Chapter 1 presents an overview of the history of the investigation of the Ainu language and the various theories hypothesized regarding its origin. The current state of language typology maintains that Ainu is a language isolate.

Chapter 2 presents phonological evidence relating Ainu to the Altaic language family. The primary source of the Altaic data is Poppe (1960). Recurring sound correspondences are hypothesized and a total of 140 Ainu lexical items are presented as having Altaic origins. Chapter 3 pursues further the question of Altaic features in the Ainu language by noting various similarities in lexical and morphological categories between Ainu and Altaic.

Chapter 4 presents phonological evidence relating Ainu to Japanese and Korean. Recurring sound correspondences are hypothesized and a total of 221 Ainu lexical items are presented as being of common origin with Japanese or Korean lexical items.

Chapter 5 discusses whether the similarities in phonology and morphological and lexical patterning between Ainu and the Altaic languages can be attributed to borrowing or to common genetic origin. I conclude that the nature of the evidence presented suggests that common origin is the correct explanation. Similarly, in the case of the relationship of Ainu, Japanese, and Korean, I conclude that these languages are descended from a Proto-Korean-Japanese-Ainu. A further conclusion, not dependent on the borrowing or common origin controversy, is that the Ainu were originally on the Asiatic mainland and later migrated to the Japanese archipelago.

An appendix, based primarily on Japanese sources contains a grammatical sketch of the Ainu language and is included for the benefit of those who do not have access to the Japanese material.

CHAPTER 1

Introduction

1.0 Background

Ainu, the speech of the aboriginal people of the northern part of the Japanese archipelago, is virtually a dead language. Although an estimated twenty thousand Ainu descendants are living in Japan (primarily in the northernmost island of Hokkaido),¹ they are completely assimilated, both culturally as well as linguistically, to the Japanese.

The Ainu language was once spoken in the Tohoku area of northern Honshu and as far north as Kamchatka (see Map 1). Corresponding to the three main geographic areas in which the Ainu lived, three major dialectal divisions have arisen: (1) Hokkaido, (2) Karafuto (Sakhalin), and (3) Kurile. The remaining Ainu in the Kurile Island chain were evacuated in 1884 to Habomai, a small island of the Kurile chain just off the coast of Hokkaido. The last known speaker of this dialect died more than twenty-five years ago.² Furthermore, with the reversion of the island of Karafuto to the Soviet Union at the end of the Second World War, the Ainu living there at the time, being Japanese citizens, were transported to Hokkaido. Thus, with the exception of some place names and terms for hunting that are still used by Japanese speakers in the Tohoku region, all remaining traces of the Ainu language are to be found in Hokkaido. Even in Hokkaido, however, the few remaining speakers of the language number less than a handful and are generally characterized as being old, in some cases senile, and remembering only fragments of songs and folk epics.

By the beginning of the Meiji Era in Japan in 1868, the population of the Ainu was already in sharp decline as a result of the ravages of disease and economic exploitation on the part of both the Russians and the Japanese. Up until this period, the Ainu were referred to as *ezo*, an old Japanese name referring to the 'barbarians' who inhabited the western part of Japan. *Ezo* is hypothesized³ to be the end product of a series of sound changes: *ezo* < *ebisu* < *emishi* < *emush* < *yumasa*. This last word is supposedly an old Ainu word meaning 'sword' and thus the use of this term by the Japanese to designate the Ainu is a reference

to the latter's ferocity and is indicative of the type of relationship that the Ainu have had with the Japanese over the centuries. The word *ainu* (*aino* in some early texts), the native word meaning 'man' or 'human', was eventually adopted by the Japanese, and the term *ezo* began to be used to designate the geographic regions in which the Ainu lived.

In the south, the immediate neighbors of the Ainu were the Japanese. In the north, the Ainu shared the island of Karafuto with the Gilyak, a Paleosiberian tribe of undetermined origin. The Ainu occupied the southern half of the island and the Gilyak, the northern. In addition to these two groups, a small group of Goldi, a Tungusic tribe that had migrated from the mainland, had established itself in the central regions of Karafuto.

In addition to these groups, various Gilyak and Ainu legends refer to a group of people by the name of Tonchi,⁴ an extinct people who were supposedly the original inhabitants of the islands of Karafuto and Hokkaido. These legends claim that the Ainu vanquished the Tonchi, forcing them to flee the islands. With the exception of Pilsudski,⁵ few scholars have given credence to these legends. The Aleut legends,⁶ which give support to them, describe their tribe's eviction from an island in the west.⁷ If these legends are true, from a geographic point of view, the most likely island from whence they were evicted would be either Karafuto or Hokkaido.

1.1 Lingusitic Investigation of the Ainu

Linguistic descriptions of the Ainu language can be said to have begun in the late nineteenth century with the work of the missionary John Batchelor. Most efforts before this, as well as much of what has come later, were done by laymen who lacked linguistic training and who were primarily concerned with geographic place name etymology or the Ainu folk epics.

Batchelor's dictionary (An Ainu-English-Japanese Dictionary, 1st ed. 1889) and his later writings formed a significant part of the resource data of subsequent researchers. Later Japanese investigators, notably Kindaichi, Hattori, and Chiri (a native Ainu) attacked Batchelor's works as containing too many inaccuracies and being unsystematic in presentation. More accurate sources of data are Chiri's *Bunrui Ainu-go Jiten* (A classificatory dictionary of the Ainu language, 3 volumes: volume 1 (1953); volume 2 (1962); volume 3 (1954)); and Hattori's *Ainu-go Hoogen Jiten* (An Ainu dialect dictionary, 1964).

Originally inspired by the efforts and scholarship of the late Kindaichi Kyōsuke, research focusing on a synchronic description of Ainu is currently in a relatively peak period. Perhaps the most zealous, and certainly one of the most productive of these current investigators, is Tamura Suzuko (née Fukuda), a former student of Hattori.

1.2 Genetic Affiliation of the Ainu Language

Regarding the origins of the Ainu and the affiliations of their language, there have been many hypotheses, but little proof to substantiate any claim. The major hypotheses about the genetic affiliation of the Ainu language are outlined in the following sections.

1.2.1 Ainu and Japanese

It has been noticed early that there are some obvious lexical similarities between the Ainu and the Japanese languages. Many of these common items can be readily identified as having a Japanese source and being borrowed into Ainu. The reverse situation also holds true, particularly in the case of names for various flora and fauna restricted to the northern regions of the Japanese archipelago. For other items, however, if the similarity is due to borrowing, the source language can not be easily identified. One such example in this category is the Japanese *kami* 'god' and Ainu *kamuɪ* 'id'. As both the Ainu and the Japanese maintain distinct religious ceremonies and beliefs, it is difficult to discern which language was the source of borrowing, if the item was borrowed at all.

The Ainu and the Japanese languages have many features which are not common to each other. For this reason, as well as because many of the obvious commonalities can be traced to borrowing, it was early noted that Japanese and Ainu appear to be unrelated languages.⁸ Ohno (1970) cites various non-linguistic evidence, including the lack of a Mongolian spot by the Ainu, taste ignorance of a specific chemical⁹, and fingerprint and blood typology, to further verify the distinctness of the Japanese and Ainu peoples.

Another problem dealing with the relationship of the Japanese and the Ainu is the question of to what extent the Ainu occupied the Japanese archipelago. Theories range from Chamberlain's (1887) hypothesis

that the Ainu were indigenous to the entire archipelago (that is, from Kyushu in the south to Hokkaido in the north) to the opposite opinion that the Ainu were never further south than the Tohoku area of northern Honshu.¹⁰

Chamberlain has little evidence to justify his hypothesis. Various archeological and anthropological evidence has been inconclusive to this date, and at times has yielded conflicting results.¹¹ For linguistic evidence, Chamberlain is reduced to fanciful etymologies for place names. The validity of items like these rests solely with the imagination of the person who proposes them; they can never be proven or disproven.

Place name etymology does, however, yield conclusive results verifying the existence of Ainu settlements in the Tohoku region. As in Hokkaido, various place names end in *-nai* or *-betsu*. These are clearly from the Ainu words for 'stream' and 'river'; *nai* and *pet*, respectively.

In conclusion, both linguistic and nonlinguistic evidence up to this point suggests that the Ainu and the Japanese are distinct peoples and that the commonalities between them are attributable to centuries of contiguity. As the origins of both the Ainu and the Japanese are obscure, however, evidence elucidating the origin of one will surely be of importance for the study of the other.

1.2.2 Indo-European Hypothesis

One of the traits of the Ainu which first impressed early Western explorers and traders in far east Asia was their nonoriental appearance. The Ainu are indeed clearly physically distinct from the Japanese; perhaps their most apparent attribute is their extreme hirsuteness. Their nonoriental traits, however, were exaggerated and stories reached Europe of a blonde, blue-eyed race inhabiting northern Japan. This immediately set the stage for the hypothesis that the Ainu were a Caucasian race. On the basis of this assumption, it was further assumed that their language was of Indo-European origin.

Primarily because very little literature dealing with the Ainu is available in languages other than Japanese, this very fanciful theory has had remarkable persistence, even though very little scientific literature has appeared on the subject. A notable example of a proponent of the Indo-European theory

is the work of Ivar Lindquist (1960) that attempts to add veracity to an earlier proposal by one Pierre Naert who claimed to offer conclusive evidence for an Indo-European origin of the Ainu language. Naert regards the most conclusive evidence in support of this theory to be a list of fourteen Ainu words having a common semantic basis in that they are all related to phenomena of 'light' or 'darkness'. Evidence is cited attempting to show that these items are of Indo-European origin.

Needless to say, a conclusion based on fourteen lexical items hardly seems warranted. As there is no attempt at finding recurring sound correspondences, the evidence rests on the lexical items as a whole. Thus the value of this study is minimal. In addition, Hamp (1968b) rejects Lindquist's proposal by showing errors in his interpretation of both the Ainu and the Indo-European data as well as by illustrating inadequacies in his theoretical approach.

1.2.3 Austronesian Hypothesis

Sternberg (1929 and earlier writings) proposes that the Ainu are of southern origin, migrating upward from an Austronesian homeland to the Japanese archipelago. The only linguistic evidence cited in support of this hypothesis is that the Ainu language appears to have no genetic relationship with its present geographic neighbors. Sternberg's primary evidence is anthropological. He cites commonalities in various designs, articles of clothing and tools, and physical appearance between the Ainu and an assortment of Austronesian tribes. All his evidence, at best, is highly inconclusive, and many of his commonalities, particularly in the area of designs, can also be found in the works of peoples of other regions of the world.

Thus the theory of the Austronesian origin of the Ainu appears to be on an academic par with the Indo-European hypotheses. Unfortunately, it cannot be as readily dismissed due primarily to the puzzling fact that some segments of Soviet scholarship appear to have accepted Sternberg's hypothesis as proven.¹²

The reason for this Soviet stance is a classic example of politics affecting scholarship. The island of Karafuto (Sakhalin) as well as the Kurile Island chain has been a hotbed of territorial claims between Russia and Japan since the eighteenth century, with each side claiming these territories as integral parts of their homeland.¹³ The Yalta

Conference of the Allied Powers in 1945 agreed to the Soviet claims, and these territories have been in Soviet possession since the end of the Second World War.

That the Ainu are indigenous to the island of Hokkaido is without dispute. That Hokkaido is an integral part of Japan also cannot be disputed. To maintain that the Ainu migrated to Japan via Karafuto would be tantamount to saying that both Hokkaido and Karafuto are essentially one territory. And since Hokkaido is without question Japanese territory, it would follow that Karafuto is likewise. Thus to avoid even the possibility of this rather embarrassing conclusion, some Soviet scholars seized upon the southern origin hypothesis. They thus maintain that the Ainu are but recent interlopers to Karafuto.¹⁴ Until, however, firm linguistic evidence is presented to justify the hypothesis of Austronesian origin, it must also be dismissed.

1.2.4 Paleosiberian Hypothesis

The most commonly accepted hypothesis concerning the affiliation of the Ainu language ties it with Gilyak and Yukagir, languages of neighboring tribes, into the broad family of Paleosiberian.¹⁵ This nomenclature, however, specifies a geographic language grouping and not a language family in the normal sense of genetic affiliation. Thus such language isolates as Gilyak and Ainu are grouped together with languages where there is sufficient evidence to hypothesize a genetic relationship (Chukchee, Koryak, and Kamchadal, for example).¹⁶

1.2.5 Altaic Hypothesis

Hypotheses concerning the affinity of the various Altaic languages were proposed as early as the middle of the eighteenth century.¹⁷ With the development of the Neogrammarian school in Germany, historical-comparative linguistics received a firm foundation, and scholars began to apply the Neogrammarian principles to languages outside the Indo-European family. Linking the various Turkish, Mongolian, and Tungusic families, however, presented far more difficulty than did the situation in Indo-European. There simply were not readily apparent large bodies of cognate words and paradigms on which to base reconstructions. What was apparent were typological similarities, and, unfortunately for Altaic studies, investigators seized on these

characteristics as necessary and sufficient for positing genetic relationships.

The two most striking typological features common to Turkic, Mongolian, and Tungusic are vowel harmony and agglutination. Oblivious to the fact that the vowel harmony systems in these language groups are not identical,¹⁸ investigators lost sight of the Neogrammarian principles, and there appeared a spate of hypotheses linking not only these language families, but anything else that exhibited these two typological features. Not only was Dravidian included in this broad linguistic unity, but so also were some of the African and American Indian languages.¹⁹ The Ural-Altaic hypothesis, an attempt to genetically relate the Uralic and Altaic families, suffers from the same deficiency as it is based almost entirely on typological similarities.

It is safe to say the Altaic studies is still suffering from this period of overzealousness, and Altaic researchers are still on the defensive.²⁰ Despite definitive works such as Poppe (1965), the fact remains that the existence of Proto-Altaic has been by no means as justified to the extent that Proto-Indo-European has. Krueger (1973:578) sums up the Altaic comparative picture as:

a strong patterning in the syntactic (typological) arrangement, a noticeable amount of identical morpheme behaviour, if not of morphemes identical through derivation; a niggardly amount of shared lexical items found system-wide; and a respectable amount of phonological correspondence.

Without evidence of recurring sound correspondences, genetic affiliation can never be supported. Typological similarities by themselves can only support an areal grouping at best, but cannot be used to justify a protolanguage. Krueger (1965:575), however, draws a distinction between a 'linguistic family' and a 'linguistic phylum'. A linguistic family is a group of languages exhibiting a large number of recurring sound correspondences from which a protolanguage can be reconstructed with relative ease based on the systematic procedures established by the Neogrammarians. A phylum relationship, on the other hand, is 'the next higher order beyond family' (p. 575) and the same degree and type of regularity cannot be maintained. Krueger concludes that Altaic linguistics must be considered phylum linguistics. Thus typological similarities, although without importance by themselves, can be used as evidence along with phonological correspondences to support an Altaic Phylum.²¹

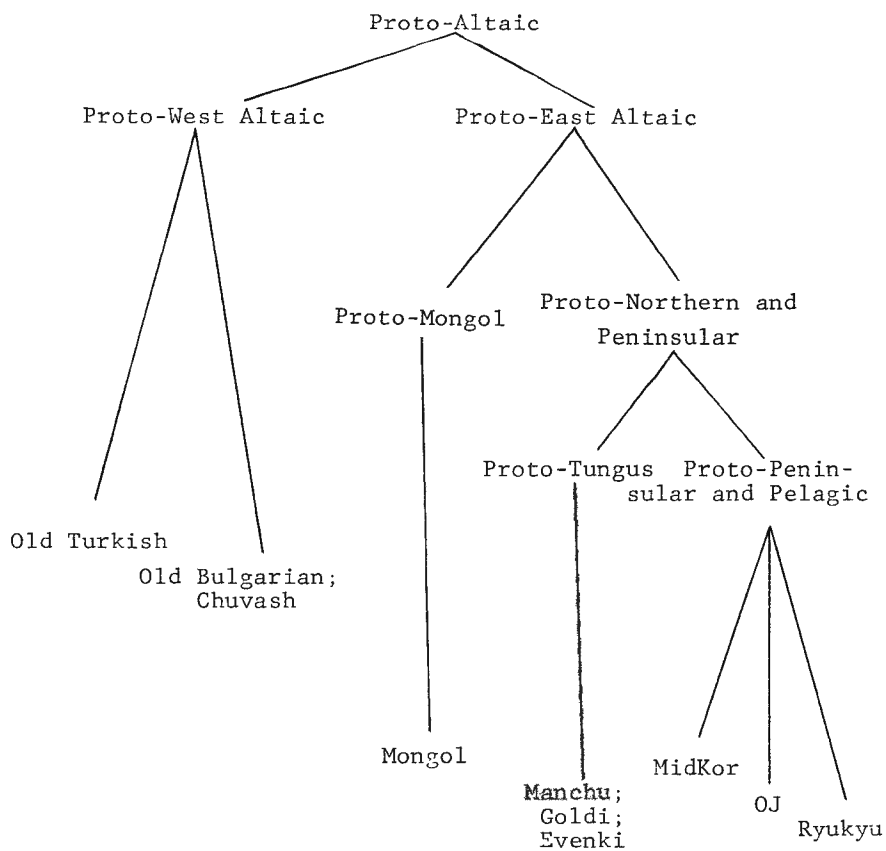


Figure 1. The Altaic Family Tree

Krueger's distinction, however, seems difficult to maintain, and, further, I question its necessity. The distinction between 'phylum' and 'family' seems little more than a terminological smokescreen created, on the one hand, as an explanation for the relative sparseness of evidence available, and, on the other, as a sort of apology to the critics of the Altaic theory. The Altaic languages are either genetically related or they are not. The field of Altaic studies is more recent than that of Indo-European, and, further, does not have as early written records as Indo-European. It is not at all surprising that the evidence justifying an Altaic protolanguage is not as clear-cut as the case for Proto-Indo-European.

The Altaic language family is a broad grouping incorporating the Turkic languages in the extreme west, the Mongolian languages in the approximate geographic center, and the Manchu-Tungus grouping in the east. Korean and Japanese have also been hypothesized to be Altaic languages. Following, Figure 1, is a tree diagram adapted from Miller (1971:44). Other than for the inclusion of Japanese and Korean, it can be considered to be the 'standard' Altaic tree.

There are no a priori grounds against the possibility of an Ainu-Altaic relationship. The Ainu on the islands of Hokkaido and Karafuto are separated by only a narrow body of water from the Altaic peoples on the Asiatic mainland. Furthermore, the Goldi, a Tungusic tribe, are the immediate neighbors of the Karafuto Ainu. Thus when one considers the genetic affiliation of the Ainu language, the Altaic family should be a likely target of investigation.

Very few hypotheses, however, have even been put forth to suggest an affiliation between Ainu and the Altaic language family. There are a variety of reasons for this. Japanese scholarship, on the one hand, has wisely devoted its energies to a synchronic analysis of Ainu, and has, as a whole, abstained from any genetic affiliation hypothesis. Soviet scholarship, on the other hand, is less than eager to approach anything which may have repercussions on Soviet territorial claims. As for Altaic scholars, they are still working to justify the existence of a Proto-Altaic linguistic unity. Attempting to incorporate languages on the fringe of the Altaic geographic sphere into the Altaic family opens Altaicists up to their detractors' charges that their theory is too flimsily based. Thus not only has Ainu been avoided, but also Korean and Japanese. As a final point, it must be noted that the inability of most Western scholars to

handle the Japanese reference materials on Ainu (or indeed even be aware of them) has hampered them from presenting any viable hypothesis, Altaic or otherwise.²²

Street (1962) does suggest the possibility of a distant Altaic-Ainu relationship by hypothesizing a Proto-North-Asiatic language family which split into Proto-Altaic and another, unspecified protolanguage (Figure 2). He does not, however, cite any evidence in support of this hypothesis. His claim is that even if Ainu is related to Altaic, the relationship is a very distant one. It follows that Altaic-Ainu cognates would be very few.

1.3 Statement of Purpose

The geographic proximity between Ainu and the Altaic languages (Manchu and Tungus as well as Japanese and Korean) suggests that even if these languages did not have a common origin, extensive borrowing could have taken place and be traceable within these language systems. The main purpose of this monograph is thus to examine the possibility of Ainu-Altaic linguistic relations; that is, whether there are Altaic loanwords in Ainu, or the possibility that Ainu is genetically related to Altaic.

Geographically, the availability of river transportation was vital in the history of the island of Karafuto. The Sungari, Ussuri, and Amur rivers on the Asian mainland provided a direct and easily navigable route from the mainland interior to Karafuto. The very earliest evidence of Chinese influence is Sui (A.D. 581-618), T'ang (618-907), and Sung (920-1279) glass beads and earrings excavated on Karafuto.²³ These articles found their way to the island via mainland tribes who had first obtained them from China and then traded them to Karafuto's indigenous peoples. Further evidence of early mainland contacts with the Ainu is found in the Chinese documents of the Han period (202 B.C.-220 A.D.) which make reference to 'hairy people' who wore fish skins and lived in the far northeast.²⁴ This presumably refers to the Ainu.

Further documentation reveals that contacts with Karafuto increased in frequency with the Mongolian conquests and the establishment of the Yüan dynasty in China (1279-1368).²⁵ In the early seventeenth century, Manchu forces established contact with the island of Karafuto, subduing the Tungus, Gilyak, and Ainu in 1644. Toward the end of the eighteenth

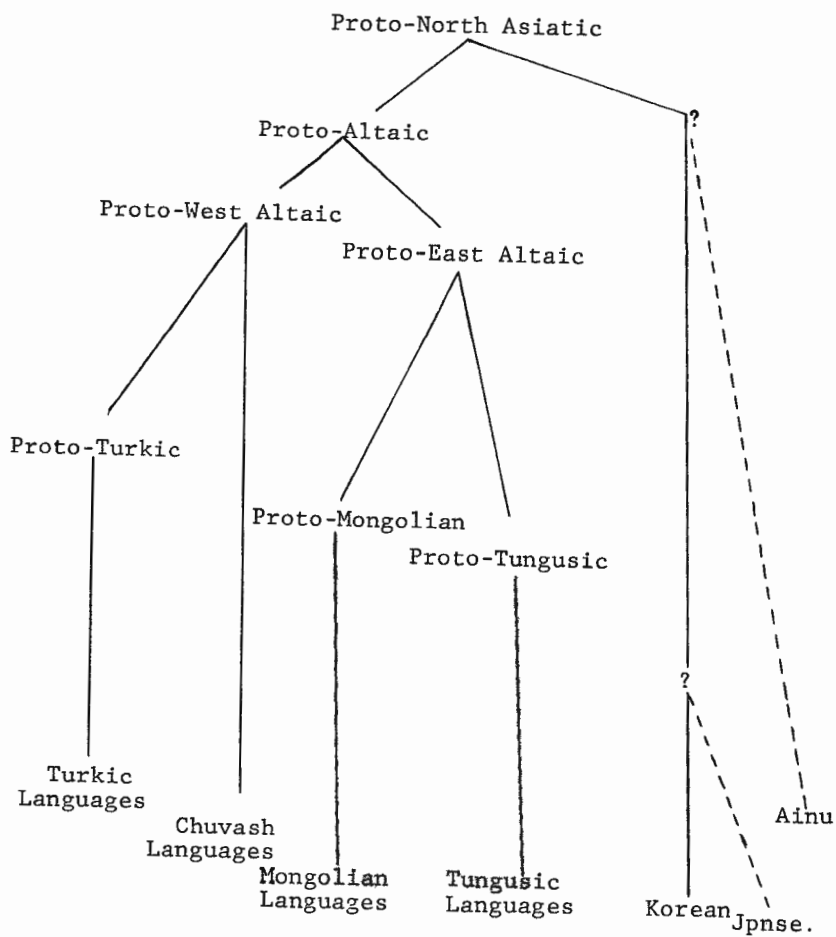


Figure 2. Altaic Hypothesis of Street (1962)

century, Manchu influence began to wane due to the increasing interests of the Japanese in that area.

Because there is no record of any contact with the Hokkaido Ainu, it is evident that all documented contact between the Ainu and Altaic peoples (the Manchu-Tungus and the Mongolians, in this case) was restricted to the Karafuto Ainu. It further appears that this contact was relatively recent. It thus follows that Altaic influences in the Ainu language should consist almost wholly of loanwords into the Karafuto dialect. This would not bar the possibility of the appearance of these same Altaic loans in the Hokkaido dialect, but it would follow that the Karafuto dialect would have a greater abundance of such loans. It should be noted that if Japanese is Altaic, the Altaic items in Ainu may have entered Ainu via Japanese. The evidence presented here however, will show that, by and large, the items of Altaic origin found in Ainu are not found in Japanese.

The evidence further shows that similarities between Ainu and Altaic are by no means restricted to the Karafuto dialect. The similarities, furthermore, will be shown to be of a number and complexity that indicates a time depth unexplained by the history of documented contact. Two possible explanations will be considered. The first, or strong hypothesis, is that Ainu is a part of the Altaic language family. As such, recurring sound correspondences as well as structural similarities exist between Ainu and the Altaic languages. A second, more cautious hypothesis, is that massive borrowing from an Altaic source or sources has taken place and that this borrowing occurred at an early stage in the history of the Ainu language. I will attempt to show that it is the first hypothesis that must be favored; that is, that Ainu is an Altaic language.

The second major purpose of this work is to present evidence justifying a Korean-Japanese-Ainu subgrouping. It must be noted that it does not have to follow that this is an Altaic subgrouping. In fact, many of the cognate sets presented to justify Proto-Korean-Japanese-Ainu do not appear to share membership with any other Altaic languages. For this reason, I deal with this data in a separate chapter. It should be stressed, however, that I consider the two conclusions to be both compatible as well as integrally related.

NOTES

1. Peng and Brainerd (manuscript), page 2.
2. Ibid.
3. Takakura (1960:7-8).
4. Stephan (1971:12).
5. Pilsudski (1912).
6. A group inhabiting the northern Kuriles, Kamchatka, and the Aleutian Islands. They are of the Eskimo-Aleut language family.
7. Stephan (1971:15).
8. Batchelor (1938) and Chamberlain (1887) are clearly of this opinion.
9. A person incapable of a bitter taste sensation from a small concentration of the chemical Phenylthiocarbamide is said to be taste-ignorant. As this trait has been known to be based on heredity, it is sometimes held to be relevant in anthropological studies. Ohno (1970:10-11) maintains that the taste-ignorance among the Ainu is among the lowest in the world and as low as one-third that of the Japanese.
10. Ohno (1970:7).
11. Ohno (1970) presents an overview in English of much of the Japanese scholarship in this area.
12. Levin (1963), and Levin and Potapov (1964), for example.
13. Stephan (1971), (1974) presents perhaps the best treatment of this complex historical issue.
14. Throughout this work, the Japanese word Karafuto will be used for Sakhalin.
15. Alternately called Paleoasiatic and Hyperborean.
16. Worth (1963).
17. Poppe (1965) gives a good account of both past and present-day researchers in the Altaic field.
18. Vago (1973).
19. Krueger (1973).
20. Witness Poppe's care in mentioning the possibility of the Altaic origins of the Korean language in his 1965 Introduction.

21. It is interesting to note that Miller (1971) based his hypothesis of the Altaic origins of the Japanese language solely on phonological and morphological grounds.
22. The works of Simeon (1968) are examples where the author has been hampered by the inability to handle Japanese source materials.
23. Stephan (1971:20).
24. Stephan (1971:20).
25. Stephan (1971:21).

CHAPTER 2

Phonological Evidence Relating Ainu and Altaic

2.0 Introduction

The sound correspondences among the various Altaic languages have been accounted for by the reconstruction of eighteen distinct consonants in the protolanguage (Poppe 1965:197-199):

| | | | |
|---|----------------|----------------|---|
| p | t | č | k |
| b | d | ǰ | g |
| | s | | |
| | y | | |
| m | n | ñ | ŋ |
| | l ¹ | l ² | |
| | r ¹ | r ² | |

In addition, Poppe (1965:202) reconstructs eighteen vowel phonemes: /i, ī, e, ě, a, u, ü, o, ö/ plus the long counterpart of each of these.

In this chapter, the Altaic data is primarily from Poppe (1960). To ensure accuracy, the German glosses used by Poppe have been retained in this work. Ainu data comes primarily from Chiri (1953, 1954, 1962) and Hattori (1964). My contribution has been to match the Ainu data with Poppe's (1960) cognate sets. By so doing, I will attempt to show that the cumulative evidence presented here is sufficiently strong to support a hypothesis of the genetic relationship of the Ainu language to the Altaic language family. In addition to this conclusion, specific mention is made of any proposed etymology that differs from that given in Chiri or elsewhere.

2.1 Proto-Altaic /p-/

Proto-Altaic /p-/ no longer remains as such in any of the Turkic or Mongolian languages. It has

remained intact only in three languages: Goldi, Olča, and Oroki of the Tungus branch of Altaic. Evidence from the other Altaic languages suggests a gradual lenition of $p > f > h > \emptyset$. Two kinds of evidence can be offered to support the reconstruction of initial /p-/ in Altaic.¹ First, the initial series /t:d/ and /k:g/ by analogy suggest /p:b/. Second, Tungus words cognate with vowel-initial Mongolian and Turkic lexical items have [h-]~[x-] and [f-]~[p-] in initial position.

Some of the more convincing lexical sets exhibiting this correspondence are:²

1. mo. oroī 'top': tung. horon: ma. foron:
olča poro 'id.'
2. mo. aluqa 'hammer': ma. folgo: oroč.
xaluka: go. palū 'id.'
3. mo. ünür 'scent', ünüs- 'to scent': ma.
funsun: oroc. xunke 'perfume': olča
pūnsé- 'to scent'

Consider now the following Ainu lexical items which have been paired with Altaic reflex sets. It will be maintained herein that the Ainu items are cognate with the Altaic forms.

2.1.1 Ainu para 'palm of the hand'

mo. alaga 'Hanfläche' ('palm of the hand')
kh. algo
mmo. halaqan < *palakan
ma. falangu
go. paŋa < *pal'ŋa
ew. haŋŋa/hanŋa 'all id.'

2.1.2 Ainu -pa 'season, age, year'

mng. fän 'year'
west mo. on 'id.'
kh. oŋ 'id.'
ma. fon 'time'
ko. pom 'spring'

2.1.3 Ainu pake 'head'

mo. ekin 'id.'
mmo. hekin < *pekin 'Kopf, Anfang' ('head, beginning')
ma. fexi < *peki(n) 'Gehirn' ('brain')
go. peyé < *pegi < *peki 'Stirn' ('forehead')

2.1.4 Ainu pirka 'good (not bad)'

mo. irüge- 'segnen, einen Segensspruch
sprechen'
('bless, to give a blessing')
mmo. hirü'e- < *pírügē- 'id.'
ew. hirugē- 'segnen, beten' ('pray')
ma. firu- 'id.'

2.1.5 Ainu piru 'to wipe'

mo. ürü- 'reiben, feilen' ('to rub, to file')
mmo. hürü- < *pürü- 'schärfen, schleifen'
('to sharpen, to hone')
ma. fura- < *pürü- 'in kleine Stücke
schneiden'
('to cut into small pieces')
furuku 'Rebeisen, Feile' ('grater, file')
AT üz 'zerreißen' ('to tear apart')

2.1.6 Ainu piri 'eddy of water'

mo. ujlilgan 'Wasserwirbel, Strudel' ('swirl
of water')
ujil- 'sich drehen (Wasser)'
hujil- 'herumwirbeln (Wasser)'
< *pujil
ma. fujufu- < *pujipu- 'kochen, siedend' ('to
boil')
ew. hujul- < *hujil- 'anfangen zu kochen'
hujūli 'Teife Stelle, Strudel,
Wasserwirbel'
lam. hujil- 'anfangen zu kochen'
go. pujur- 'kochen'

2.1.7 Ainu ori 'to dig'

jpnse. horu
tungus ul-
ryukyuan puruŋ 'all id.'
ko. pha 'to dig, excavate'

2.1.8 Ainu hure 'red'

mng. fulān
mmo. hula'an
dagur xulā
ma. fulgiyan
west mo. ulayan 'all id.'
mko. pirk 'fiery'

2.1.9 Ainu hōs 'leggings'

mo. ojimosun < hoimasun < *pojimasun 'Strumpf'
 ('stockings')
 ma. fomoči < *pojimatī 'Filzstrümpfe'
 ko. posjen/pešen 'Strumpfe'

2.1.10 Ainu hu 'fresh'

ko. phul 'grass'
 tungus huli 'fresh'
 mo. ölü-öle 'id.'
 tkc. öl 'id.'

2.1.11 Ainu uku 'to blow (with the lips)'

oj. Fuk-
 mo. ülije
 ma. fulgije-
 ko. pīl 'all id.'

2.1.12 Ainu ure 'foot' (used only in compounds)

ma. fatxa < *padakai 'paw'
 mo. adag 'end, the lower course of a river'
 chuv. ura < *adak 'foot, leg'
 AT ađaq 'foot, leg'

2.1.13 Karafuto Ainu unci 'fire'

trkm. ōt
 yakut uot
 khalaj hū^ot 'all id.'
 mo. oči < *oti 'spark'
 jpnse. fuji 'proper name of a volcano'
 oj. *ponopo 'flame'
 ko. pul 'fire'

2.1.14 Ainu uynavuna 'ashes'

go. puñakta < *pünekte
 mo. ünesün
 mmo. hūnesun
 mngr. funiezē 'all id.'

2.1.15 Ainu uray 'a type of stake placed standing in a river to catch fish'

mo. urga/uraga 'Fangstange' ('snaring pole')
 mmo. huraqa < *puraka 'Falle' ('trap')
 bur. uriḡa 'Falle'
 kalm. urḡn 'Falle, Schlinge' ('noose')
 ma. ḡurqa 'Falle'
 lam. hurka 'Schlinge, Falle'

2.1.16 Ainu ur 'fur coat'

- mo. ürtesün 'Lappen, Flicken' ('rag, cloth,
patch')
mmo. hürtesün < *pürte-sün 'Seidenlappen'
(('silk cloth'))
ma. furdexe 'Pelzware' ('furs')

2.1.17 Ainu ur 'hill'

- mo. oroi, mmo. horai < *porai 'Kopfscheitel,
Oberteil des Kopfes, Gipfel'
(('crown of the head, top or upper
part of the head, summit'))
mo. orgil < *horgil < *porgil 'Gipfel'
ma. foron 'Scheitel' ('apex, parting')
go. porrō 'id.'
ew. horōn 'Scheitel, Oberteil' ('top, upper
part')

It can be seen that the development of proto-Altaic initial /p-/ in Ainu is somewhat conservative. Initial /p-/ has been completely lost before the high back vowel, /u/, (2.1.11-2.2.17). Sets 2.1.7-2.1.9 suggest that this sound loss was gradual; the bilabial stop first lenited to /h/ before disappearing completely.

The large number of dictionary entries beginning with the sequence /po-/, however, suggest that the /p-/ has been preserved in this position. In contrast, the occurrence of initial /pu-/ is extremely limited. Hattori (1964) lists forty-five occurrences of initial /pu-/, but 187 of initial /po-/.³ Of the forty-five instances of /pu-/, four are immediately identifiable as recent loanwords:

1. *pukuru* < jpnse. *fukuro* 'bag'
2. *puta* < jpnse. *buta* 'pig'
3. *puta* < jpnse. *futa* 'lid'
4. *puturuhka* < Russian *butylka* 'bottle'

In addition, Chamberlain (1887) cites the following item:

5. *puri* < jpnse. *furi* 'custom'

Of the 187 /po-/ entries, only one is readily perceived as a loan:

6. *potoki* < jpnse. *hotoke* 'Buddha'

2.2 Proto-Altaic Initial /t-/

Unlike the divergent development of Altaic /p-/, the development of Altaic initial /t-/ has been uniform in the various branches of the Altaic family. Without exception, Proto-Altaic /t-/ has been preserved before all vowels except /i/ and /i/, in which cases the various dialects of Manchurian, Mongolian, and Chuvash have developed a /č-/. An examination of the following reveals a similar development in Ainu.

2.2.1 Ainu tuš 'animal pelt'

mo. tulum 'großer Sack' ('large bag')
 ko. turumagi < *tulumaki 'Mantel' ('cloak')
 kas. tulup 'Ledersack' ('leather sack')

2.2.2 Ainu tokvtuk 'to jump'

tung. tukša-, tuksa- 'to jump'
 tukšaki 'hare'
 oj. tog- 'to protrude'

2.2.3 Ainu top 'bamboo'

mo. tojig < towīg < tobīk 'Kniescheibe'
 ('kneecap')
 kh. toig 'id.'
 ma. tobgiya 'Knie' ('knee')
 yak. tobīq
 AT tobīg 'all id.'

2.2.4 Ainu toy 'earth'

jpnse. tuti 'id.'
 ko. tutuk, tutēng 'bank, levee, ridge'
 tk. toz 'dust'
 mo. toγosun < *towārsun < *topārsun 'Staub,
 Erde' ('dust, earth')
 mmo. to'osun 'id.'
 AT topraq 'id.'

2.2.5 Ainu to 'lake'

tung. tongi 'id.'
 ?jpnse. -to 'body of water'

2.2.6 Ainu tok 'to peck (as a bird)'

tkc. tikʷtuqʷtok 'to pierce, to peck'
 jpnse. tsuk- 'to pierce, to prick'

2.2.7 Ainu tem 'the arms'

mo. teberi- 'umarmen, in die Arme nehmen'
 ('embrace, hug; to take into
 one's arms')
 ma. tebelije- 'id.'
 lam. tɛwɛl- 'id.'
 ko. tɛbir- 'am Armfassen, führen' ('grasp
 the arm; to lead, to guide')

2.2.8 Ainu teur 'entrails of fish'

mo. türüsün 'Laich' ('spawn, fish roe')
 ew. tirɛkɕɛ 'id.'

2.2.9 Ainu tara 'bare'

tara sekuma 'bare mountain ridges'
 mo. tar 'Grindkopf' ('scabheaded')
 taraqai 'grindköpfig' ('scabheaded')
 ew. taraka 'kahlköpfig' ('bald')
 kum., kas., tat taz 'kahlköpfig'

2.2.10 Karafuto Ainu tanku 'hundred'

ma. tanggû 'id.'

2.2.11 Ainu cip 'boat'

mo. čibki- < *tipke- 'untertauchen, ins
 Wasser tauchen, hineingesteckt
 werden'
 ('dive, dip; to plunge into
 the water; to be put into')
 ew. tipkɛ- 'hineinstoßen' ('to push into')
 tipkɛn- 'id.'
 tipkɛn 'Pfropfen' ('stopper, cork, plug')

2.2.12 Ainu cikóykip 'beast'

mo. činar < *tīnar 'Natur, Wesen, Wesensart,
 Eigenschaft' ('nature,
 personality, characteris-
 tic, feature')
 mmo. činar 'Liebe, Zuneigung' ('love, affec-
 tion')

- AT t̄in < *t̄in 'Atem' ('breath')
 tin- 'atmen' ('breathe')
 t̄inl̄i 'Lebewesen' ('living being, creature')
 oir. t̄in- 'atmen'
 t̄in 'Seele' ('soul')
 yak. t̄in 'Seele, Atmen'
 oir. t̄inarl̄iq 'Tier, Lebewesen' ('animal')

Despite the paucity of /c-/ initial lexical items cited here, the change of Ainu /ti-/ > /ci-/ is a likely historical development since /ti-/ is an unallowable segment sequence.

In reference to item 2.2.12. Chiri (1962) derives Ainu cik̄oykip from *ci* 'we' + *koyki* 'take' + *p* 'thing'. Now consider the following Ainu lexical items and the derivations proposed by Chiri:

1. cikap 'bird'
 There is no derivation given for this item.
2. cep 'fish'
 < *ci*ep < *ci* 'we' + *e* 'eat' + *p* 'thing'
3. cironnup 'fox'
 < *ci* 'we' + *ronnu* 'kill' + *p* 'thing'
4. cirayci 'Harbor Seal (*Phoca vitulina*)'
 < *ci*raycip
 < *ci* 'these' + *rayci* 'kill' + *p* 'thing'

Chiri's derivations seem semantically implausible. There seems to be little motivation for designating 'fish' as a 'we-eat-thing' when countless other items of both flora and fauna would fit into the same semantic designation. Furthermore, the semantic derivation of both 'fox' and 'Harbor Seal' is virtually identical despite the fact that these two are entirely unrelated animals.

Note that Ainu 'bird', *cikap*, is considered by Chiri to be a single morpheme. If, however, it is considered with the other forms discussed earlier, it is possible to isolate the /ci-/. The cognates in set 2.2.12 permit an interpretation of this prefix as an Altaic morpheme meaning 'life' or 'animal, beast'. This hypothesis would call for a reanalysis of the derivations of the preceding items as well as give a plausible and compatible explanation for the derivation of *cikap*.

Item 2.2.10, Karafuto *tanku* is likely to be a loan from Manchu as no other Altaic cognates can be found. Not only does this item not appear in the Hokkaido dialect, but it is also seen as being a lexical item pertinent to the vocabulary of trade. It is thus reasonable to conclude that borrowing from Manchu occurred in this case.

2.3 Proto-Altaic Initial /k-/

Proto-Altaic initial /k-/ was preserved before front vowels in all branches of the Altaic family. Before the back vowels, however, /k-/ became /q-/ in Mongolian and Turkic, and /x-/ in Chuvash while remaining /k-/ in Manchu-Tungus. Similar to Manchu-Tungus, the evidence for Ainu indicates preservation of initial /k-/ in all environments.

2.3.1 Ainu kirpo 'fat'

(< *kir* 'fat' + *po* 'diminutive marker')

- mo. qarbiŋ 'Hängebauch, Bauchfett' ('potbelly, belly fat')
- ma. qalbi 'die fleischigen Teile an den beiden Seiten des Bauches' ('the fleshy parts on both sides of the belly')
- ew. kalbiŋ 'Fettpolster unter der Brust' ('layers of fat below the chest')
- ko. kalbi 'Rippen' ('ribs')
- nko. karbi 'id.'
- chuv. jur < *xur < *qⁱar < *kaŋ 'Fett' ('fat')
- oir. qazı 'Fett, Schmalz' ('fat, lard')
- sag. qazı 'Bauchfett des Pferdes' ('bellyfat of horses')

2.3.2 Ainu kisma 'to press down on'

- mo. kisa- 'unterdrücken, drücken' ('oppress; squeeze, press')
- chuv. qis- 'zu en sein, drücken' ('to be too tight')
- AT qis- 'zwingen' ('to force')
- yak. kihan- 'Not leiden, in Bedrängnisein' ('to suffer from hardship; to be in a predicament')

2.3.3 Ainu ki 'to do it'

mo. ki- < *kī- 'tun, machen, hineinlegen'
 ('do, make, place into')
 ew. kē- 'tun, machen'
 yak. kīn- 'id.'
 AT qīl- *qī-l- 'tun'

2.3.4 Ainu kema 'foot'

oj. kubo 'heel'
 mong. kōm 'thick hide'

2.3.5 Ainu kewre 'to shave it, to whittle it, to plane it'

mo. kir-ga- 'to clip, to shave'
 osm. qīr- 'to shave, scrape'
 ma. giri- 'to cut'
 go. geri- 'to cut out'
 jpnse. kir- 'to cut'
 ko. kal- 'to whet, grind'
 mko. kol- 'id.'
 PKJ (Martin 1966) *kyɔr-

2.3.6 Ainu kes 'end, edge, the finish'

cf. tokes 'the end of the day, i.e.,
 evening'
 ankes 'the end of the night, i.e.,
 early morning'
 jpnse. kisi 'shore, brink'
 ko. ka < kas < kōs < *kōc 'id.'
 mo. kižayar 'Grenze, Rand' ('border, limit')
 AT, chuv qīdīy 'Rand'

2.3.7 Ainu kere 'divided, split'

ew. kalta- 'become broken, split in two'
 lam. kalta- 'in two'
 ko. kalū- 'splits, cuts in two, severs,
 divides, parts'

2.3.8 Ainu kewe 'to expel, drive out'

mmo. kere- 'kämpfen' ('fight, combat')
 mo. kereldū- 'zanken, streiten' ('quarrel,
 dispute')
 kerčegei < *kerečekei 'grausam' ('cruel,
 terrible')
 ew. kērčēmę < *kere-če-me 'zornig, wutend'
 ('angry, enraged')
 čag., oir. kəriš- < kār-i-š- 'zanken'
 ('quarrel')

2.3.9 Ainu kar 'family'

cf. ahupkar 'to marry' (<ahup 'enter' +
kar 'family')
matkarku 'niece' (mat 'female')
oj. kara 'family'
ko. kyële < kyëloy 'race, genetic stock'
oroči, go., solon xala 'family'
ma. hala 'exogamous social unit'
dagur xala 'family'
AT qavas 'kin'

2.3.10 Ainu kasu 'a ladle, a large spoon'

oj. kasiFa 'vessels for eating and drinking'
ew. kalbaka 'spoon'
mo. qalbuya 'id.'
tkc. qaʁuq 'id.'

2.3.11 Ainu kam 'muscle'

mo. qonɖulari < *koŋɖulai 'Lenden,
Oberschenkel' ('loins, thigh')
qonʒijasun < *koŋɖigāsun 'der Hintere'
('the rump')
ma. qonsun 'After' ('anus')
ew. kundukī 'Kreuz' ('small of the back')
ko. kuŋɖuŋi 'Nates' ('the rump')

2.3.12 Ainu kap 'skin, bark, outer cover'

mo. qabturğa 'Börse, Tasche, Sack' ('purse,
pocket, pouch, sack')
qabqag 'Deckel' ('lid, cover')
ko. qaphi 'skinny, peeling'
tung. qap 'Behälter, Eierschale' ('container,
eggshell')
jpnse. kawa < *kaPa 'skin, bark'
tuv. xap 'Sack'
trkc. qobuq 'bark'

2.3.13 Ainu kar 'to peel; drill fire' .

mo., mmo. qar-u- 'graben, kratzen' ('dig,
scratch')
kh. xar 'id.'
ma. qarqa- 'kratzen die Fiedel mit dem Bogen
streichen' ('to stroke the fiddle
with the bow')
ko. kalk- 'kratzen, schaben' ('grate, scrape')
AT qaz- < *qar²- 'graben'
yak. xas- 'id.'
gilyak kar 'shovel'

2.3.14 Ainu kapke 'flat'

mo. qabtagai < *kaptagai 'flach' ('flat')
 qabtaji- 'flach werden' ('become flat')
 mmo. qabtasun 'Brett' ('board')
 ma. qapaχun 'flach'
 qapara- 'flach werden'
 ew. kaptama 'breit, flach, Brett' ('broad
 wide')
 lam. kaptačā 'eingesunken, eingedrückt'
 ('sagging, pressed in')

2.3.15 Ainu kararak 'type of crow (*Corvus corone
Orientalis*)'

jpnse. karasu 'crow'
 ko. kač'ičak 'id.'
 tkc. qarya 'id.'
 ma. karaki 'id.'
 mo. käriyā 'id.'

2.3.16 Ainu koro 'while, when'

jpnse. koro 'id.'
 tkc. qolurkur 'id.'

2.3.17 Ainu kosina 'to fasten, to tie to'

mo. küli- 'to bind'
 trkm. güyl- < *kül- 'to bind the hands and
 feet'

2.3.18 Ainu kotan 'village, town'

mo. qota 'Schafshürde, Stadt' ('sheep pen;
 town')
 kalm. χot° 'Zaun, Umzäunung' ('fence, enclo-
 sure')
 ew. gōta 'Zaun'
 gōta- 'umzäunen' ('to enclose, to fence
 in')
 ko. kot 'place, locality, site'

2.3.19 Ainu kuy 'to chew'

jpnse. kui- 'to bite into, to eat'
 mo. kebi-de-sun 'des Wiederkäuen, das
 Wiedergekäute' ('rumination
 of cud')
 kas. küjse- 'kauen, wiederkäuen' ('to chew')
 karak. güjseü 'das Wiedergekäute'
 baš. köjös 'id.'
 osm. geviš 'id.'
 chuv. kavle 'id.'

2.3.20 Ainu kut 'throat'

ko. kut 'opening, mouth'
 jpnse. kuči 'mouth'
 mngr. guji 'neck, throat'

2.3.21 Ainu kur 'shadow'

niskur 'cloud' (< *nis* 'sky + *kur*
 'blackness')

kunne 'black'
 ekurok 'dark'

jpnse. kurasi 'dark'
 kuru 'to get dark'
 kuro 'black'
 kumo 'cloud'

ko. kurum 'cloud'
 kurim 'soot'
 kərimca 'id.'
 kurimca 'shadow'
 kəm 'black'

tung. kurunyk 'soot'

komnomō 'black'

mo. kara 'black'

küräng 'brown'

tkc. kurim 'soot'

kara 'black'

hungarian korom 'soot' (?<tkc.)

2.3.22 Ainu kut 'a girdle'

mo., mmo. quči- 'bedecken, verdecken' ('to
 cover, conceal, hide')

AT, čag., osm. quč- 'id.'

oir. qučaq 'Armvoll' ('armful')

The regularity of the development of Altaic initial /k-/ in Ainu is particularly striking. It is, in fact, more conservative than the development in the majority of the other Altaic languages:

| Manchu-Tungus | Mongolian | Chuvash | Turkic | Proto-Altaic |
|---------------|-----------|---------|--------|--------------------|
| k | k | k | k | *k/___front vowels |
| k | q | x | x | *k/___back vowels |

Thus only in the Manchu-Tungus branch of Altaic was /k-/ preserved before both front and back vowels; in other branches, there was a divergent development in these two environments.

It does not have to be maintained that the existence of Ainu /k-/ before a back vowel in the correspondences cited above must be a result of borrowing from a Manchu-Tungus language since this was the only group that preserved /k-/ in this environment. Note that the voiceless uvular stop /q/, the regular development of /k-/ before back vowels in Mongolian and Turkish, and the voiceless velar fricative, /x/, the regular development in this environment in Chuvash, do not appear in the phonemic inventory of Ainu. If an item with one of these phones in the initial position were to have been borrowed into Ainu, it is very reasonable to assume that they would appear as /k-/. There is thus no basis for identifying a source language for the cited items in the event that they are borrowings.

2.4 Proto-Altaic Initial /b-/

2.4.1 Ainu ure 'to bury, cover-up'

- mo. büri- 'bedecken, verhüllen' ('to cover, to veil')
 bürijesün 'Bedeckung, Dach' ('covering, roof')
 kalm. бүрḗсүн 'id.'
 yak. бүр- 'mit irgend etwas einfassen' ('to border with something')
 бүрүҥ- 'verdecken' ('to cover')
 бүрүн- 'sich einhüllen' ('to seal oneself up')

az bürün- 'sich einwickeln' ('to wrap one-
self up')
pA. *bür₁i- 'to cover, enclose'

2.4.2 Ainu ura 'damp place usually covered with
willow'

mo., mmo. burgasun 'Weidengebüsch, Zweige'
('willow bush, branch')
bur. burgāhaŋ 'id.'
ma. bužan < *burgan 'Wald' ('wood, forest')
ew. burgan 'ein Flußufer, das jedes Jahr
überschwemmt wird' ('an
annually flooded riverbank')
yak. burān/murān 'Hügel, Berg' ('hill,
mountain')

2.4.3 Ainu ok 'the neck, the nape of the neck'

mo. boyorla- < *bogārlā-
mmo. bo'orla- 'den Hals abschneiden' ('to
cut the throat')
bur. bōrlo- 'quälen' ('to bother, pester')
tsch. pīr 'Kehle' ('neck')
AT, osm. boyaz 'Kehle'
tuv. bōstā- 'den Hals abschneiden'

2.4.4 Ainu oheugevohoge 'crooked, bent'

mo. bōkōn < *bōken 'Buckel, Höcker' ('crooked,
bent')
ew. beķe 'id.'
lam. bokčēkēn 'id.'
čag. būkrī 'gebogen, gebeugt, bucklig' ('bent,
curved, humpbacked')

2.4.5 Ainu uok 'to fasten, to wrestle'

mo. boyo- < *bogā 'binden' ('bind, tie')
mmo. bo'o- 'versperren' ('bar, block, ob-
struct')
kh. bō- 'zubinden'
mo. boyomi < *bogāmī 'Schlinge' ('loop, sling,
noose')
boyol < *bogāl 'Sklave' ('slave')
mmo. bo'ol 'id.'
ew. bōk 'zurückhalten, aufhalten' ('hold back,
stop')
bōkan 'Sklave'
bōlgīčān 'Sklaverei' ('slavery')

The development of Altaic /b-/ in the various branches is quite regular: /b-/ remained as such in all cases except Chuvash where it was devoiced into /p-/. The preceding data indicate that Altaic /b-/ was lost in the development of Ainu. Although it seems reasonable to hypothesize a development of /b-/ > /w-/ > /φ/, there is no evidence to justify this intermediate stage. It should be further noted that this loss of /b-/ might have been restricted to those instances where it preceded round vowels only as items 2.4.1-2.4.5 are all in this category.

2.5.0 Proto-Altaic /d-/ and /ʃ-/

Miller (1971) presents sound comparative evidence for concluding that Proto-Altaic /d-/ and /ʃ-/ had a similar development in the Japanese language. The following evidence suggests that the same holds true for Ainu.

2.5.1 Ainu yara 'to do through another, as a superior through his subordinates. A particle expressing reverence to the object of the verb'

mo. dolig 'Südenbock, Pfand' ('deposit, security')
 AT juluy 'Opfer, Lösegeld' ('sacrifice, offering; ransom')
 ko. tal- 'give me'
 jpnse. yar- 'give'
 pKJ (Martin (1966)) *dar-
 pA *dal

2.5.2 Ainu iro 'color'

iroki 'having color, colored'
 mo. düri 'Aussehn, Form, Gestalt' ('appearance, shape')
 ma., go. durun 'id.'
 AT jüz 'Gesicht'
 oj. yurö > yirö > irö 'color, facial appearance'
 pA *dür₂i 'Aussehn'

2.5.3 Ainu to 'breast (of a woman)'

mo. delen 'Euter' ('udder')
 ma. delen 'Zitze'
 lam. dɛlɪŋa 'id'
 kum. jălin 'Euter'
 baš. jələn 'id'

2.5.4 Ainu i- (ne) 'four'

mo. dörben < *dör-ben 'id.'
 ma. dujin < *dügin < *dō-gün 'id.'
 AT tört 'id.'
 pA dō-
 oj. yō- 'id.'

2.5.5 Karafuto Ainu ewara 'to fan; to blow with the lips'

mo. debi- 'schwingen, flattern, wehen'
 ('swing, flutter, fly')
 debigür 'Fächer' ('fan')
 ma. deberen 'Bogel junges' ('young bird')
 lam. dēwūl- 'wehen' ('blow')
 dēwū 'Wind' ('wind')

2.5.6 Ainu yuk 'deer'

mo. Jegerde, mmo. Jē'erde 'rotes Pferd,
 fuchs' ('red horse, sorrel')
 mo. Jegeren 'Antilope' ('antelope')
 kh. zer 'id.'
 sol Jegerē 'id.'

2.5.7 Ainu e- 'to eat'

ma. Jē- 'essen' ('to eat')
 AT Jē- 'id.'
 ew. Jēwge 'Speise, Essen' ('food')
 mo. Jēme 'Aas' ('carrion, carcass')

2.5.8 Ainu emaka 'to discard, to abjure, to cast away'

(< ema + ka 'transitive verbalizer')
 emakap 'garbage, refuse'
 mo. Jēme 'Aas, Überreste Einew von Wölfen
 zerfleischten Tieres'
 ew. Jēmū 'Hunger, Essenslust' ('hunger')
 pA. *Jēm-
 jpnse. yabu 'refuse heap, garbage dump'

2.5.9 Ainu ay 'arrow'

ew. Jējē 'Messerschneide' ('knife edge')
 lam. Jēj 'id.'
 mmo. Jer 'Waffe' ('weapon')
 jpnse. ya 'arrow'
 pA *Jē

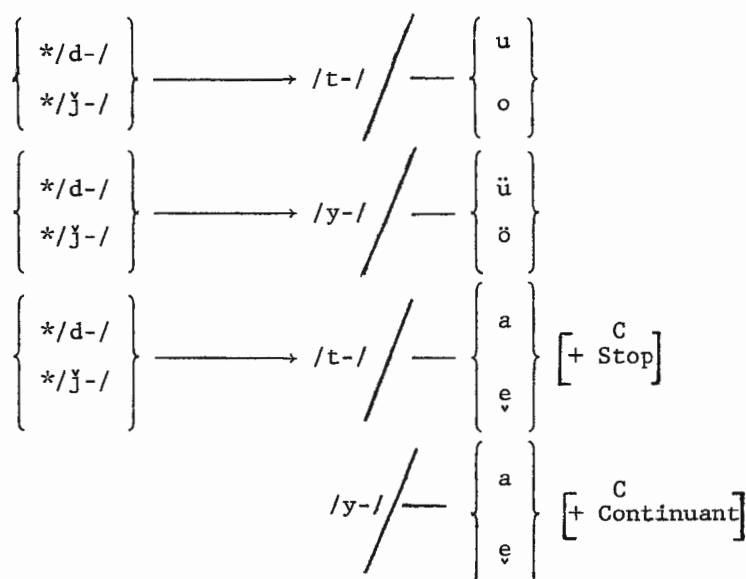
2.5.10 Ainu tura 'accompany'
(<tu '2' + ra ?)

mo., mmo. ʃirin 'zwei' ('two')
 ew. ʃūr 'id.'
 ʃūkt̚ʃ 'beide' ('both')
 ma. ʃuru 'Paar' ('pair, couple')
 ʃuw̥ 'zwei'
 oj. ture 'companion'
 ko. teli- < tali- < t̚li 'accompany'

The development of Proto-Altaic /d-/ and /ʃ-/ has been quite varied:

| Manchu-Tungus | Mongolian | Chuvash | Turkic | Proto-Altaic |
|---------------|-----------|---------|--------|--------------|
| ʃ (ma.) | ʃ | ś | y | *d/___[i] |
| d | d | ś | y | *d elsewhere |
| ʃ | ʃ | ś | y | *ʃ- |

Despite this variance within the major language families, the development of */d-/ and */ʃ-/ appears to be parallel. Miller (1971:82-86) cites a similarly parallel development of these two phonemes in the history of the Japanese language. His hypothesis, however, is somewhat more complicated because it takes into account the quality of the following vowel, and, in certain cases, the value of the subsequent consonant also. Miller's hypothesis can be schematically represented as follows:



The Ainu data given in this section tentatively suggests that proto-Altaic /d-/ and /j-/ also fall into the preceding development.

2.6.0 Proto-Altaic /g-/

2.6.1 Ainu her 'beam of light; to shine brightly'

mo. gerel 'Licht, Strahl' ('light, ray, beam')
 mmo. gere 'Glanz' ('brightness')
 ma. gere 'hell werden' ('to get light')
 ew. ḡērī < *gērei < *gēre-i 'hell' ('clear, bright')

2.6.2 Ainu hui 'the inside fat of animals of the larger kinds; by some, the liver'

mo. gūjege < *gūjigē < *gūdigē 'Magen' ('stomach')
 ew. gudigē 'Magen eines Tieres' ('stomach of an animal')

The change of Proto-Altaic /g-/ to Ainu /h-/ is phonetically plausible. The Ainu alternants *eroki* ~ *heroki* 'herring' indicate that there may be a development of */g/ > /h-/ > /φ/.

2.7 Proto-Altaic Initial /s-/

2.7.1 Ainu sir 'earth, land'

mo. širuyai 'Staub, Erde' ('dust, powder')
 mmo. širo'ai 'Erde' ('earth, soil')
 kh. šoroi 'id.'
 ew. s̄iruḡi 'Sand, Sandbank in einem Fluß'
 ('sand, sandbank in a river')
 chuv. šur < *šar 'Sumpf' ('swamp')
 čag., kum. saz 'Sumpf'

2.7.2 Ainu sirotke 'to stick, pierce'

mo. šibüĕ < *sibüĕ 'Ahle' ('awl')
 mmo. šibüĕ 'Bohrer, Pfriemen' ('drill, awl,
 punch')
 mo. šibüĕr 'spitz' ('pointed')
 chuv. šəvər < *sibür 'scharf' ('sharp')
 osm. sivri 'id.'
 kas. süjru 'id.'
 oir. süru 'id.'
 tuv. sür 'id.'

2.7.3 Ainu siru 'to polish'

tkc. sil < sür 'to rub, to polish'
 ko. söl 'brush'
 jpnse. sur- 'to rub; to grind'
 mo. sili-; sile- 'to stroke (a dog)'

2.7.4 Ainu siri 'instead of, in place of'

kor. səro 'each other, mutually'
 mo. selü- 'to alternate'
 selēn 'change, variation, turn'

2.7.5 Ainu sipi 'to refine'

mo. šigur < *šiwūr < *sipūr 'Besen' ('broom')
 from šigu- < *šiwū- < *sipū-
 'durchsieben, durchkämmen' ('to sieve, to
 screen')
 mmo. ši'u- 'schöpfen (mit dem Netz), fischen'
 ('to scoop (with a net), to fish')
 kh. šū- 'sieben' ('sift')
 ew. sippij- 'fegen' ('sweep, clean')
 čag. süp 'Besen'
 süpsa 'id.'
 sipūr 'id.'
 AT sipir- 'fegen'

2.7.6 Ainu sikes- 'to ill treat, speak against, scold'

mo. söge- < *sökegē 'schelten, schimpfen'
 ('to rebuke, scold')
 kalm. sögē- 'id.'
 bur. hüge- 'Unsinn sprechen' ('to speak
 nonsense')
 trkm. sōk- 'tadeln, schelten' ('to blame')
 yak. üöχ- < *sōk 'id.'
 jpnse. sikar- 'to scold'

2.7.7 Ainu sikai 'peg, pin'

mo šiya- 'hineinschlagen, hineintreiben'
 ('pound in, drive in')
 kh. šā- 'id.'
 AT siŷiś 'Keil' ('peg, dowel, wedge')

2.7.8 Ainu sik 'eye (n.)'

mo. šigaya- < *sīgīgā- 'durch ein Loch sehen,
 belauern' ('to peep
 through, to lie in
 wait for, to spy on')
 kalm. šayā- 'id.'
 ew. siḡin- 'id.'

2.7.9 Ainu siski 'to urinate'

mo. šige- 'harnen' ('to urinate')
 mmo. šī'e- 'id.'
 mo. šigesün 'Harn' ('urine')
 kh. šēs 'id.'
 bur. šehen 'id.'
 ma. sike 'Harn'
 site- 'harnen'
 chuv. šêr- < sigd- 'harnen'
 osm. sig- 'harnen'

2.7.10 Ainu sippo 'salt, brine'

oj. siwo 'salt'
 tung. siyu 'id.'

2.7.11 Ainu usi 'to smear'

si 'fecal matter, dung'
 mo. šiba- 'beschmieren, auftragen'
 ('besmear, to put on, to lay on')
 šibar 'behm, Schmutz, Schlamm' ('mud;
 dirt, filth; mud')

mmo. sibar 'Schlamm, Schmutz'
 kh. sawar 'id.'
 ew. siwā- 'schmieren, zuschmieren' ('to smear')
 siwar 'Sumpf' ('swamp')
 lam. hibā- 'auftragen, beschmieren'
 osm. siva- 'beschmieren, auftragen'

2.7.12 Ainu sunke 'a lie, a falsehood'

mo. sun- 'sich ausdehnen' ('to spread')
 sun-ga- < *sun-ga- 'dehnen, strecken'
 ('to extend, expand, stretch')
 ew. sūnŋiža- 'dehnen, spannen' ('to strain')
 sūnŋi- < *sun-gi 'ausdehnen'
 AT sun- 'ausstrecken' ('to spread out, to extend')

2.7.13 Ainu sum 'oil (obtained from animal fat)'

mo. semeži 'imeres Fett, Bauchfett' ('internal fat, belly fat')
 bur. hemže 'id.'
 ew. seṃṃsik 'Bauchfleisch mit Fett' ('belly meat with fat')
 ma. semsu 'Bauchfett'
 chuv. samâr < *sāmīr 'fett, feist'
 AT sāmiz 'Fett'
 sāmri 'fett werden' ('to become fat')

2.7.14 Ainu se 'to carry on the back'

 setur 'the back (of a person)'
 (< se 'back' + tur 'side')
 ko. či- 'to carry on the back'
 tung. jü- 'id.'
 yak. sük- 'id.'
 chuv. sēkle 'to bear, to carry'
 jpnse. se/so 'back'

2.7.15 Ainu serema 'a guardian; health, life, well-being'

ko. sari- 'to be careful of oneself, to be anxious about oneself'
 mo. seremji 'caution'
 tung. seremče- 'to be cautious; to act cautiously'

2.7.16 Ainu sa 'a space; an interval'

ko. sai 'id.'
 tung. saja 'the interval between the fingers
 or between the claws'
 go., olča. saja 'id.'
 mo. saba 'the uninhabited frontier land be-
 tween two districts or countries;
 no man's land'

2.7.17 Ainu saye 'a coil of rope'

ko. sarai- 'one round, one turn (said of
 ropes or similar things)'
 tung. sar- 'to wind around'
 sary- 'id.'
 mo. sarigu 'curved, winding'
 kalm. sarū, sarū 'id.'

2.7.18 Ainu cawsa 'seashore; low bank of a river'

mo. sajir 'ein trockenes und steiniges
 Flußbett' 'a dry rocky riverbed'
 kh. sair 'id.'
 čag., oir. saj 'trockenes und steiniges
 Flußbett, seicht' 'shallow, low'
 tat. sajiq- 'seichtsein' ('to be shallow')

2.7.19 Karafuto Ainu ciire 'to roast, broil'

mo. šira- 'braten' ('roast, grill, bake,
 broil')
 mmo. šira- 'id.'
 kalm. šar- 'id.'
 ew. sīla- 'auf einem Spieß braten' ('to
 roast on a spit')
 lam. helat- 'auf einem Spieß braten'

2.7.20 Ainu sešmau 'a four-year-old buck'

ko. sasim 'a stag, a deer'
 tung. sašyn, hasyn 'Renntierherde'
 sesin 'herd, flock'
 go. sešij 'id.'
 ma. sesilenge 'a herd of wild reindeer'

The development of Proto-Altaic /s-/ is quite regular in the various branches of Altaic: /s-/ is preserved as such, except in Manchu, Mongolian, and Chuvash where it is palatalized before /i/. As /si-/ freely alternates with /ši-/ in Ainu (Appendix

6.2.2), the correspondences presented here reveal a similar development in Ainu with the exception of 2.7.19 and the variation in 2.7.18.

Item 2.7.7 Ainu *sikai* 'peg, pin', exhibits a correspondence which supports the entry of this item into Ainu at an early stage in the development of both Ainu and the Altaic languages. If it were the case that this item were borrowed into Ainu, the source of borrowing would have had to have been from a language that was contiguous to Ainu or with which Ainu had some contact. As Manchu-Tungus does not enter into this set of correspondences, the source of borrowing would be presumably Mongolian. Note, however, that the Mongolian gloss is not identical to the Ainu form, but that the AT gloss is. This gap offers support for the common origin of this item; that is, Ainu and AT had preserved the original meaning and that this original meaning was somewhat modified in the development of Mongolian.

2.8 Proto-Altaic Initial /č-/

2.8.1 Ainu čima 'boil, eruption, scab;

mo. čigiqan < *čiwīkan < *čīpīkan 'Geschwür,
Furunkel' ('abcess, ulcer; boil')
bur. siḡaŋ 'id.'
classical mo. čibil < *čīpīl 'Schmutz, Sunde,
Scham, Unreinheit, ('dirt,
filth, shame')
tel. čibīryan 'Pickel' ('pimple')
čag. čīpqaŋ 'Furunkel'
trkm. čīban 'id.'

2.8.2 Ainu ko'ocis 'to hate'

<ko '?' ocis 'get extremely angry'
mo. ös < *öč 'Rache, Haß' ('revenge, hatred')
ösiye 'Haß'
mmo. öš 'Feindschaft, Rache' ('hostility')
kalm. öšētē 'verhaßt'
trkm. öc 'Rache'
AT öč 'id.'

2.8.3 Ainu čiw 'river current; tidal current'

ko. čolčol 'bubbling, flowing, running of
water (onomat.)'
tung. čurgivčorgi 'to drop, to drip, to flow'
mo. čorkira- 'to bubble up'
ma. čolxo- 'to bubble up (as a spring)'

2.8.4 Ainu ci 'penis'

ko. čāji
go. čilču
ol. čiču
ma. čočo 'all id.'

2.8.5 Ainu cik 'time; when'

ko. cĕk 'id.'
jpnse. toki 'id.'
mo. čag 'Zeit' ('time, era age')
mmo. čaq
AT čaq
yak saχ 'all id.'
go. togo 'interval'

2.8.6 Ainu ci 'ripe; grow old'

kalm. čili- 'anschwellen' ('to swell up')
trkm. čīš- 'schwellen'

2.8.7 Ainu čuk 'autumn'

čukpa 'id.' (< čuk + pa 'season, time')
ko. čuk- 'to die, to expire, to be weak'
tung. čuku- 'not to know or understand'
mon. čöke, čökü- 'to abandon all hope, to
despair of, to be unable to'
uig. čök- 'to sink, to decline'

2.8.8 Karafuto Ainu caake 'edge, border'

mo. ča'ada < *čagāda 'bei, jenseits' ('at on
the other side, beyond, across')

kh. cāna 'jenseits'
caiši < čagāši 'in jener Richtung, weiter
dorthin' ('farther, there,
that way')

ma. časi 'dorthin'
čala 'jenseits'
čargi 'id.'

ew. čāgū 'entfernt' ('distant')
čagidaku 'fern, hinter, jenseits' ('far
behind')

lam. čāskī 'ferner, künftig' ('farther, fu-
ture')

2.8.9 Ainu čača 'old person'

- mo. čaji- < ča-ji- 'weiß werden' ('become
white')
 časun < čā-l-sun 'Schnee' ('snow')
 čal 'weißhaarig, grauhaarig' ('white,
gray-haired')
 ma. čalfa < čālbān 'Bast, Birkenbast' ('bast,
birch bast')
 ew. lam. čālbān 'Birke' ('birch')
 AT čal 'grauhaarig'

The development of Proto-Altaic initial /č-/ has been quite regular: /č-/ has remained /č-/ in all branches of Altaic except Chuvash where it has emerged as /ś-/. The items in the preceding list indicate a similar conservatism in Ainu; that is, /č-/ has remained /č-/.

2.9 Proto-Altaic Initial /y-/

2.9.1 Ainu ya 'interrogative marker'

- mo. yaḡun < *yāgūn 'was' ('what')
 yambar < *yān-bar 'welcher' ('which one')
 mmo. yan 'was für ein' ('what kind of')
 ma. ya 'wer, was' ('who, what')
 yade 'wo' ('where')
 ew. ēma < *yāma 'was für ein'
 ēdu < *yādu 'warum' ('why')
 ēlā < *yā-la 'wo'
 lam. yāk/ēk 'was für ein'
 yādu 'warum'
 yā- 'was tun' ('what can be done')
 yāgāi 'warum'
 go. xaidu < *yādu 'wo'

2.9.2 Ainu yap 'to ascend, go up (pl.)'

- mo. yabu- < *yapu- 'gehen' ('to go')
 ma. yafa- 'id.'

The development of Proto-Altaic initial /y-/ in the various branches of Altaic has been relatively conservative; */y-/ remains /y-/ except in Chuvash which has developed a palatalized /ś-/. Forms 2.9.1 and 2.9.2 cited above would seem to indicate similar conservatism in Ainu; that is, Altaic */y-/ remained /y-/ in Ainu. The two forms, however, are

insufficient to justify positing a regular sound law despite the very accurate phonetic and semantic fit.

2.10 Proto-Altaic Initial /m-/

2.10.1 Ainu mim 'flesh of fish'

mo. miqan, mmo. mīqan < *mikan 'Fleisch'
('meat')
kh. maḡa 'id.'
oir. biqin 'Lenden' ('loins')
oj. mi 'flesh, fruit'
ko. mom 'id.'

2.10.2 Ainu mēpiru~mēpiro 'a kind of wild onion'

mo., mmo. maḡgirsun 'wilde Zweibel' ('wild
onion')
kalm. maḡgrsq 'id.'
ko. mañil 'Knoblauch' ('garlic')

2.10.3 Ainu meri 'a twinkle; a bright flash of light or fire'

mo. merijen 'bunt, scheckig, Schecke' ('spot-
'ted, colorful')
ew. mērimē 'bunt'
AT bāzān- < *māzān- 'sich schmücken' ('to
adorn, decorate oneself')
osm. bāzā- 'schmücken'
bāzāk 'Schmuck, Verzierung' ('ornament,
decoration')

2.10.4 Ainu mošir 'island' < mo + šir 'land'

mo., mmo. mören 'Fluß' ('river')
mmo. also 'Meer' ('sea, ocean')
ma. muke 'Wasser' ('water')
ew. mū < *mō 'id.'
ko. maul < *mur < *mör 'id.'

2.10.5 Karafuto Ainu manka 'strong'

mo., mmo. mönke 'ewig' ('eternal, everlast-
ing')
ko. mango 'Ewigkeit' ('eternity')
AT bāngü 'ewig'
osm. bāngi 'id.'

2.10.6 Ainu moro 'house, pit dwelling'

tung. malu 'sacred place in house for ancestor worship'
 silla mari 'elevated place in house'
 mko. molo 'floor'
 oj. muro 'protecting shed, house, cave'

2.10.7 Ainu mun 'a drop (of water), a ball'

mo. mončog < *mončak 'Halsschmuck eines Pferdes' ('neck decoration for a horse')
 bur. monsgor < *mončagar 'rund' ('round')
 monsorī- < *mončaji- 'rund werden' ('become round')
 ko. muṇ 'Kugel, rund' ('ball')
 osm. bonžuq 'Perlen, Halsperlen' ('pearls, pearl necklace')
 kha. monžix 'id.'

Proto-Altaic initial /m-/ has remained /m-/ in all branches of Altaic except Turkic where it has denasalized into /b-/. The foregoing evidence indicates that Altaic */m-/ has also remained unchanged in Ainu.

2.11 Proto-Altaic Initial /n-/

2.11.1 Ainu mi 'to wear'

mo. nemüre- 'bedecken, ein Kleidungsstück überwerfen' ('to cover, to slip on a piece of clothing')
 nemürge 'Bedeckung, Mantel' ('covering, coat')
 mmo. nemür- 'überdecken'
 ew. nēmew- 'sich bedecken' ('to cover oneself')
 nēmēlē- 'satteln' ('to saddle')
 ma. nemergen 'Mantel aus Gras' ('coat made of grass')

2.11.2 Ainu -niw-niw 'counter for people'

ko. nä 'man, person'
 go. nai 'man'

2.11.3 Ainu noye 'to twist'

jpnse. nawa 'rope'
 ko. no 'id.'
 tung. nēm 'id.'

2.11.4 Ainu mo- 'gentle, peaceful'

mo. nojir < *nowīr < *nobīr 'Schlaf'
 kum. jovaš 'friedlich' ('peaceful')

2.11.5 Ainu noma ~ numa 'a morass, swamp'

mo. namug < namuk 'Sumpf' ('swamp')
 ew. namargan 'Sumpf'
 lam. nāwukta 'Moos' ('moss')

2.11.6 Ainu ni 'to suck, to sip'

go. luṇḃe- 'verschlucken' ('swallow')
 ma. nuṇḃe- 'id.'
 ew. nimḃe- 'id.'
 ko. nēmgu- 'id.'

2.11.7 Ainu numa 'hair'

mo. noyosun < *nuḃā-r-sun 'Wolle' ('wool')
 ma. nungari < *nuḃa-ri 'id.'
 küärik juṇ < *juḃa < *nuḃa 'Haar, Wolle'
 ('hair')

2.11.8 Ainu nuy 'flame'

mo. nölüḃe 'Flamme' ('flame, blaze')
 ew. nul- 'Feuer machen' ('to light a fire')
 lam. nulul- 'flammen' ('to flame, to blaze')
 ko. nul- 'brennen' ('to burn')

The development of Proto-Altaic initial /n-/ was such that it was modified into /y-/ in Turkic, /ś-/ in Chuvash, but remained unchanged in Mongolian and Tungus. The forms just mentioned indicate a similar conservatism in Ainu. For a discussion of the [m-]~[n-] alternation, refer to section 4.18.

2.12 Proto-Altaic Initial /ɲ-/

2.12.1 Ainu nu- 'eye' (used only in compounds)

nupe 'tear' (< nu 'eye' + pe 'water')
 nukar 'to see' (< nu 'eye' + kar 'to have')
 mo., mmo. nidün < *ɲündün 'Auge' ('eye')
 ew. ɲundun 'id.'
 ko. nun < *ɲundun < *ɲündün 'id.'
 ?oj. nem- 'to glare at'
 ?jpnse. namida 'tears'
 ? < na 'eye' + midu 'water'

2.12.2 Ainu (Shiraura dialect) nikax 'to go bad, turn sour'

mo. niq̄u < *ɲik-u- 'kneten' ('knead, massage')
 ma niq̄a- 'zerfallen' ('fall to pieces; to decay')
 ko. ningi- 'kneten'
 jpnse. niga- 'bitter'
 AT jiq̄- 'schlagen, vernichten' ('to strike, destroy')

As is seen in this set of correspondences, the alveolar nasal was the regular Ainu development of the palatal nasal stop that existed in Proto-Altaic.

2.13 Proto-Altaic Liquids

As Proto-Altaic liquids never appeared word-initially, all instances of their reflexes in the Altaic languages are normally expected to be word-internal. It has been well-attested early in the history of the Altaic theory that the major division between proto-Western Altaic (i.e., Turkish and Chuvash) and proto-Eastern Altaic (i.e., Mongolian and Tungus) is on the basis of the development of the liquids (Figure 3, adapted from Miller 1971: 124): in proto-Western Altaic, *r₂ and *l₂ developed into /s/; in proto-Eastern Altaic, they did not.⁴

Miller (1971:124) posits that the development of the Proto-Altaic liquids is the same for Korean and Japanese, thus confirming the status for these two languages within the Altaic unity. Miller's

theory posits that Korean-Japanese had a development somewhat unique from both proto-Eastern and proto-Western Altaic; that is, pA $*r_2$ remains /r/ in Korean and Japanese, thus similar to the Eastern Altaic languages, but pA $*l_2$ developed into /s/ in Korean and Japanese, thus similar to the Western Altaic languages.

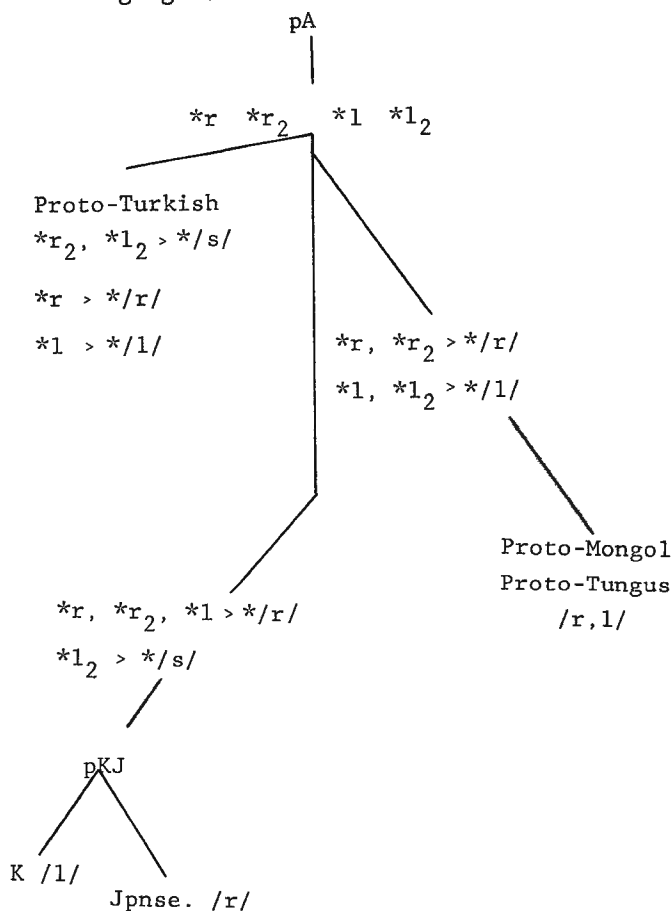


Figure 3. Proto-Altaic Liquids

Evidence from Ainu appears to suggest that Ainu has undergone a development similar to that in Korean and Japanese. Because the liquids in question occur only word-internally, all Ainu items exhibiting reflexes of the word-initial reflex sets of other phonemes in this chapter. For this reason, only the citation number followed by the Ainu lexical item is given for each of the following categories.

Category I: proto-Altaic */l₁/:Ainu /r/

1. 2.5.1
Ainu yara 'to do through another'
2. 2.14.1.1
Ainu ar- 'one side, part of'

Category II: proto-Altaic */l₂/:Ainu /s/

1. 2.3.10
Ainu kasu 'a ladle'
2. 2.3.17
Ainu kosina 'to fasten, tie to'

Category III: proto-Altaic */r₁/:Ainu /r/

1. 2.3.5
Ainu kewre 'to shave it'
2. 2.4.1
Ainu ure 'to bury, cover up'

3. 2.7.3
Ainu siru 'to polish'
4. 2.14.1.4
Ainu ar 'that over there'
5. 2.14.3.3
Ainu urur 'river bank'

Category IV: proto-Altaic */r₂/:Ainu /r/

1. 2.1.5
Ainu piru 'to wipe'
2. 2.2.9
Ainu tara 'bare'
3. 2.3.1
Ainu kirpo 'fat'
4. 2.3.1.3
Ainu kar 'to peel, drill fire'
5. 2.3.1.5
Ainu kararak 'type of crow'
6. 2.3.2.1
Ainu kur 'shadow'
7. 2.5.2
Ainu iro 'color'
8. 2.7.1
Ainu sir 'earth'
9. 2.10.3
Ainu meri 'a twinkle, a bright flash
of light or fire'

The establishment of an */l₂/ > /s/ development now can be used to support the Altaic origin of the following Ainu item:

- 2.13.1 Ainu *isepo* ~ *osopo* 'rabbit'
 (< *oso/tse* + *po* 'diminutive marker')
 osukep 'id.' (Taraika dialect)
 osukex 'id.' (Shiraura, Aihama, Tonnai,
 Tarankomari dialects)
 mo. *taulai* < **tawlai* < **tablai* 'Hase'
 ('hare')
 kh. *tūlai* 'id.'
 AT *tabiš̄yan*
 yak. *tabiš̄xan*
 čag. *tawušuqan*
 osm. *tavšan* 'all id.'
 jpnse. *usagi* < **wosagi* 'rabbit'

The cited Ainu and Japanese forms in 2.13.1 appear to have little resemblance to the Altaic items other than an /s/:/r/ correspondence. Miller (1971:116-7), however, very cleverly analyzes the Japanese form to be of direct Altaic descent. It is fairly easy to model his derivation of the Japanese form and posit an identical etymology for the Ainu form.

Miller begins by isolating the word initial morpheme /ta-/ from these items. He maintains that this element was prefixed to the form for 'rabbit' in all the various Altaic languages with the exception of Japanese. It did, however, survive in Japanese and was used as a prefix in the sense of 'wild' or 'untamed' in certain lexical items; for example, *tasigi* 'snipe'. In Ainu, this morpheme appears to have left no traces, and it can be assumed that it was not prefixed to the proto-Ainu form for 'rabbit.' By isolating out this prefix, the original phoneme sequence in proto-Altaic for 'rabbit' is thus */-bl₂g-/, and, as with Japanese, this can be traced step-by-step to the Ainu form.

The regular Ainu correspondence of internal */-b-/ appears to be /-w-/ (cf. Ainu *iwor*, item 2.15.1). The proto-Ainu form can thus tentatively be reconstructed as **wosVke*. As there are no phonemic voiced obstruents in Ainu, it is furthermore reasonable to assume on the basis of the Japanese evidence that the final consonant was voiced, thus **wosVge*. The resemblance at this point between the Ainu and the Japanese forms should leave little question about their original unity. Upon retracing the sound shifts of proto-Altaic /-b-/ to Japanese-Ainu /-w-/ and proto-Altaic /l₂/ to Japanese-Ainu /-s-/,

we arrive at one-to-one identity with the reconstructed proto-Altaic form.

2.14 Proto-Altaic Vowels

Poppe (1960) proposes that proto-Altaic was characterized by an underlying eighteen vowel system. There existed both long and short varieties of each of the following nine vowels: *i, *ī, *u, *ū, *e=(ä), *ē, *o, *ō, *ä. The following data reveals that Ainu has greatly simplified this vowel system by neutralizing the long/short contrast as well as by eliminating the front-rounded vowels.

2.14.1 Proto-Altaic /a-/

2.14.1.1 Ainu ar- 'one side/part of'

- mo., mmo. ala 'die Stelle zwischen den
Beinen' ('the area between
the legs')
ew. alas 'Schenkel' ('calf, thigh')
aldan 'id.'
AT al 'Vorderseite' ('front part')
alinda 'vor (irgend etwas)' ('in front
of something')
alt., tel., leb., šor. alin 'Unterteil,
unter' ('lower part, under')
tat., kum., osm. alt 'Unterteil, unterhalb'
(below, underneath')

2.14.1.2 Ainu ak 'younger brother'

- mo., mmo. aqa < *akā 'älterer Bruder'
(older brother)
kalm. axp 'id.'
ew. akā 'jüngerer Bruder des Vaters od. der
Mutter' ('father or mother's
younger brother')
lam. akan/akka 'der ältere Bruder, Onkel'
(older brother, uncle)
yak. aya 'Vater' ('father')
ko. akki 'younger brother'

2.14.1.3 Ainu apa 'door, doorway'

- ew. amṇa < *amga < *amgai < *amagaj 'Mund'
(mouth)
mo. ama 'Mund, Öffnung' ('opening')
go. aṇma 'Mund'

ma. aŋga < *amŋa < *amga 'id.'
 alt., kas., kir. am < *ama 'die weiblichen
 Geschlechtsorgane' ('the female sex organs')

2.14.1.4 Ainu ar 'that (over there)'

mo. aru 'Hinterteil, Rücken, Norden'
 ('hindpart, back, the North')
 lam. arkan/arkun < *ārukan 'Oberteil des
 Rückens' ('upper part of the back')
 AT arqa < *āru-ka 'Rücken'

2.14.1.5 Ainu apo ~ hapo 'mother'

mo. ebei < *epei < *epà-i 'Mutter, Mütter-
 chan' ('mother, little old wo-
 man')
 chuv. appa < *äpà 'ältere Schwester'
 ('older sister')

2.14.1.6 Karafuto Ainu ham 'not'

ko. an(i) 'id.'
 go. ana < a-na 'id.'

2.14.1.7 Ainu apa 'relative'

ko. aba- 'father'
 mo. aba 'id.'
 kalm. awa 'id.'

2.14.1.8 Ainu amam 'rice (or other cereal grain)'

mo. amusun 'grits, pap, porridge'

2.14.2 Proto-Altaic /i-/

2.14.2.1 Ainu itako 'female shaman'

mo. udagan 'Schamanin' ('shaman')
 idugan 'id.'
 ew. idokon 'id.'

2.14.3 Proto-Altaic /u-/

2.14.3.1 Ainu upas ~ opas 'snow'

mo. oṕa < owa < *upà 'weiße Schminke'
 ('white make-up')
 ma. ufa < *upà 'Stärke, Puder' ('starch,
 powder')
 kir., čag. opa 'weiße Schminke, Kreide'
 šor. oba 'Kreide' ('chalk, white powdery
 substance')

2.14.3.2 Ainu ut 'rib'

mo. učig < *učik 'Ende eines Fadens,
 Fadenende' ('end of a thread')
 oir., šor., čag uč 'Ende' ('end')
 trkm. ūč 'Ende'

2.14.3.3 Ainu ururu 'river bank'

mo. urus- 'fließen' ('flow')
 lam. ūru- 'herausfließen' ('to flow out')
 koib. ur- < *ūru- 'fließen'

2.14.3.4 Ainu umen 'to tire (of some activity)'

<umi + wen
 mo. unta- < *umta- 'schlafen' ('to sleep')
 untara- 'erlöschen' ('expire, go out')
 umarta- 'vergessen' ('to forget')
 ew. omṑo- < *omgo- < *umga 'Vergeßlichkeit,
 Vergessenheit' ('forgetfulness, obli-
 vion')
 lam. omṑa- 'vergessen'
 yak. u 'Schlaf'
 AT uniṑ- < *unt- < *umt- 'vergessen'
 oj. um- 'grow tired of, disgusted with'

2.14.3.5 Ainu uto 'door of house or pit dwelling'

mo. örūke 'Rauchöffnung in der Jurte'
 ('smoke opening in the yurt')
 mmo. örūge 'Deckenfenster' ('skylight')
 ew. urkē 'Tür' ('door')
 ma. uče < *urke < *örke 'Tür'

2.14.3.6 Ainu utakararip ~ otakarip 'starfish'

kogurye utu 'five'
 ??jpnse. itu-(tu) 'id.'

Chiri (1962:80) derives 2.14.3.6 *utakararip* 'starfish' from *uta* 'sand' + *ka* 'above' + *rari* 'pushing against' + *p* 'thing'. It is difficult to see the semantic connection between a starfish and a 'pushing against the sand thing'. If anything, Chiri's derivation more aptly describes a crab; certainly not a starfish. The variant form, *otakarip*, forces Chiri (1962:80) to posit an entirely different etymology for that form: *ota* 'sand' + *karip* 'round dish'. The semantic absurdity of this latter derivation needs no further comment. If we accept the Kogurye form as cognate, a more plausible etymology emerges; namely, *uta* '5' + *kara* 'made from' + *p* 'thing'. It is semantically plausible for a starfish to be designated as a 'made from five thing'. It should be noted, however, that Ainu no longer employs *uta* in the numeral system, but appears to have replaced it with the morpheme for 'fingers', *ašik*.

2.14.4 Proto-Altaic /e-/

2.14.4.1 Ainu *epara* 'to condemn, to injure'

mo., mmo. *ebde-* < **epde-* 'zerbrechen,
zerstören' ('to break to pieces,
destroy')
kh. *ewdə-* 'id.'
ew. *ew-* 'id.'

2.14.4.2 Ainu *i'unin* 'to be sick' (Obihiro dialect)

mo. *enel-* 'unglücklich sein, trauern, traurig sein' ('to be unhappy, to mourn, to be sad')
ew. *enūnil-* 'krank werden' ('to become sick')
lam. *enčī* < **enčī* 'Schmerz' ('pain')
enək 'Krankheit' ('illness')
ew. *enəlil-* 'überdrüssig werden' ('to get tired of')
sag. *enig* 'Muhē, Qual' ('pain, torment')

2.14.4.3 Ainu *ekaši* 'old man, an ancient'

mo., mmo. *eke* 'Mutter' ('mother')
ew. *ekē* 'ältere Schwester' ('older sister')
ekī 'Tante' ('aunt')
lam. *eken* 'ältere Schwester'
chuv. *akka* < **ākä* 'ältere Schwester'

2.14.4.4 Ainu ek 'to come'

mngr. šži- 'gehen' ('to go')
mo. eči- 'id.'
dag., ord. iči- 'id.'

2.14.5 Proto-Altaic /o-/

2.14.5.1 Karafuto Ainu ociw 'to have sexual inter-
course'

mo. oju- 'to kiss, to have sexual inter-
course'
ojuḡa 'penis'
kir. ejun 'game'
ma. ojombi 'to kiss'

2.14.5.2 Ainu otakina 'type of wild grass (*Mertensia asiatica*)'

\langle ota 'plant name' + kina 'grass'
 mo. otači < ota-či 'Arzt, Kräuterarzt'
 ('doctor, herb doctor')
 kalm otocⁱ 'id.'
 ot^o < *ota 'Kraut, Heikraut' ('herb,
 healing plant')
 trkm., yak. et 'Gras, Kraut, Heu' ('grass,
 hay')

2.14.5.3 Ainu om 'thigh'

mo. omoruɣun 'Brustbein (eines Pferdes)'
 ('breastbone (of a horse)')
 mmo. omori'ud 'Brustknochen'
 bur. omofuŋ 'Brustbein eines Pferdes'
 osm. omuz 'Schulter' ('shoulder')

In all these correspondences, both the semantic and phonetic fit is good thus leaving little doubt about the common origin of these items.

2.15 Proto-Altaic Noninitial Consonants

The cognate sets listed throughout this chapter for initial consonants and vowels have also exemplified the development of certain of the noninitial consonants. Although they are thus not treated in a separate category in this work, they most certainly constitute an area for further investigation.

The following set, however, is listed in this section because the vowel reflex is anomalous with any of the reflex sets dealt with in this chapter.

2.15.1 Ainu *iwor* 'cave, place where a bear or deity lives'

mo. *uʏurqai* < **uwūqai* < **ubūrkai* 'Loch,
Grube, Schacht' ('hole, pit,
shaft')
ew. *uwu* < **ubūr* 'Vertiefung' ('hollow')

This correspondence set suggests that, as with word-initial */b-/, medial */-b-/ has also lenited into a glide. Perhaps due to syllable structure constraints, this glide is still preserved in the medial environment. Although the initial vowel in the Ainu form of 2.15.1 differs from that of the other items in this correspondence set, the change is not phonetically extreme for both the rounding and the backness of the original vowel are still preserved in the quality of the glide in Ainu *iwor*.

2.16 Summary of Correspondences

The following is a summary of the Ainu reflexes of the various proto-Altaic phonemes based on the data presented in this chapter.

| Proto-Altaic | Ainu |
|--------------|--|
| *p | p > ø |
| *b | w > ø |
| *t | č/___[i] t elsewhere |
| *d, *ʃ | $\left\{ \begin{array}{c} t \\ y \end{array} \right\}$ |
| *k | k |
| *g | h > ø |
| *s | s |
| *č | č |
| *y | y |

| Proto-Altaic | Ainu |
|-----------------|------|
| *m | m |
| *n | n |
| *n' | n |
| *l ₁ | r |
| *l ₂ | s |
| *r ₁ | r |
| *r ₂ | r |
| *a | a |
| *i | i |
| *u | u |
| *e | e |
| *o | o |

NOTES

1. Aalto (acknowledging Ramstedt) 1955:09.
2. Aalto (acknowledging Pelliot's citing of Ramstedt) 1955:09.
3. It should be noted that Hattori (1964) lists dialectal variations of the same morpheme as separate lexical items. Thus the actual number of distinct morphemes in both the /po-/ and the /pu-/ categories is somewhat reduced.
4. Refer to Figure 4.

CHAPTER 3

Morphological and Lexical Evidence

Relating Ainu and Altaic

3.1.0 Interrogative

3.1.1 Ainu Interrogatives

Refer to the Appendix for an outline of the various interrogative markers and interrogative formations in the Ainu language.

3.1.2 Proto-Altaic Interrogative Markers

The proto-Altaic interrogative marker has been reconstructed as *yā- (Poppe 1965). It appears with various suffixed elements, the exact semantic values of which are unclear, in secondary formations such as: *yāg-, *yān-, and *yādu. Miller (1971:190) culls the following etymologies from Poppe's various works to illustrate the appearance of these formations:

- pA *yā- 1. yāg-: mo. yaḡun 'what'
-
2. yān-: mo. yambar, mmo. yan 'what kind, what sort of'
-
3. yām-: ew. ēma 'id.'
-
4. yādu: ew, ēdu; lam. yādu 'why' go. xaidu 'where'

Miller (1971-191) summarizes the development of this morpheme by stating:

The best attested (and for that reason we must also necessarily conclude the most widespread) type of interrogative in the original proto-Altaic linguistic unity consisted of various secondary formations resulting from suffixation

onto the original interrogative root $pA\ *y\tilde{a}-$; of this there can be little doubt. But early in the history of the Altaic linguistic community, and before the geographical and linguistic separation of proto-Tungus and proto-Peninsular and Pelagic from the other languages, i.e., more or less at the time of the proto-Northern and Peninsular Altaic unity, this root itself subdivided into two different varieties, one continuing the original proto-Altaic shape unchanged as $*y\tilde{a}-$ and its related forms, the other showing an early Northern and Peninsular innovation as a root $*x\tilde{a}-$ ($x\tilde{a}-?$); and it was this second form that next served as the root morpheme in numerous secondary and tertiary formations in the Northern and Peninsular languages.

The precise conditioning factor(s) for this subsequent development were later lost, but this loss was still at an early stage in the division of Proto-Northern and Peninsular Altaic. The expected result is thus that both interrogative morphemes would appear in the subsequent branches of this Altaic subdivision.

There is some evidence suggesting that the regular development of proto-Altaic $*/y-/$ is Ainu $/y-/$ (section 2.9.0). If this is the case, then the Ainu interrogative marker ya can be matched with the reconstructed proto-Altaic marker $*y\tilde{a}-$.

Another interrogative morpheme in Ainu is he (section 6.11.3). As the following examples show, it can function as both a prefix and an enclitic:

| | | |
|---------|----|--------------------|
| e-korpe | he | 'is it her thing?' |
| hemanta | | 'who?' |
| humna | | 'what?' |
| hunak | | 'where?' |
| hempar | | 'when?' |
| hempak | | 'how many?' |

Can Ainu *he* be related to the proto-Northern and Peninsular interrogative marker **xa*? Because Ainu does not have a velar fricative in its inventory of phones, it is phonetically plausible for the reflex of this segment to be /h/ in Ainu. In fact, this appears to be the regular reflex of the voiced velar stop /g-/ (section 2.6.0). The vowel correspondences, however, cannot be as facily handled. There appears to be little justification for pA **/a/* to have an /e/ reflex in Ainu.

The remaining Ainu interrogative marker, *ne-* (Appendix, section 6.11.3), can also be shown as possibly having Altaic origin. Recall that evidence was given showing the regular Ainu reflex of pA **/n-/* to be /n-/. Consider now the AT form *nä* 'what'. Its function as an interrogative morpheme in Old Turkish is seen by the following paradigm:

- | | | |
|----|--------------|-----------------|
| 1. | <i>näkä</i> | 'why?' |
| 2. | <i>näčä</i> | 'how?; somehow' |
| 3. | <i>nämän</i> | 'how?' |
| 4. | <i>nälük</i> | 'why then?' |

In addition to the Old Turkish forms just cited is the Old Japanese morpheme *nani* 'what'. It appears that this may also be related to both the Ainu and the Old Turkish forms. The semantic match is acceptable and the nasal consonant correspondence is regular.

Also supporting the cognate relationship of the Ainu, Old Turkish, and Old Japanese forms is the vocalism involved. As there are no variants in the Ainu data, the reconstructed proto-Ainu form must be **ne-*; that is, the vowel must be nonback. The frontness of the vowel is in agreement with the Old Turkish form. In the case of Old Japanese, Miller (1971: 194) states that the quality of the epenthetic vowel in OJ *nani* was governed by the rules of vowel harmony. The epenthesis of a front /-i/ as opposed to a back vocalism such as /-u/ thus indicates that the vowel of the root was originally front. There is thus a convincing match both semantically and phonetically for the Altaic origin of these items.

3.1.3 Indefinites Derived from Interrogatives

An interesting feature of some Altaic languages (but by no means unique to them) is the addition of

further compounding layers of interrogatives with a resulting semantic sense of indefiniteness. Consider the following data:

1. Japanese: dare 'who'
dare ka 'someone'
nani 'what'
nani ka 'something'
doko 'where'
doko ka 'somewhere'
itu 'when'
itu ka 'sometime'
ikura 'how much'
ikura ka 'some amount'
2. Korean: moës 'what'
moësitinči 'something/whatever'
ëdi 'where'
ëditinči 'somewhere/wherever'
nugu 'who'
nugutinči 'someone/whoever'
ënče 'when'
ënčëtinči 'sometime/whenever'
ënčëna 'id.'
ček 'book'
čëkitinči 'whichever book/book or
something'
čëkina 'id.'
3. Ainu: nen 'who'
nen-ka 'someone/whoever'
nen-neyakka 'id.'
nep 'what'
nep-ka 'something/whatever'
nep-neyakka 'id.'
nekon 'how'
nekon-ka 'somehow/however'
hempar 'when'
hempar-ka 'sometime/whenever'
hempar-neyakka 'id.'

Thus in Japanese, Korean, and Ainu, the compounding of an interrogative marker to an interrogative word results in a new category labeled 'indefinites'. It is interesting to note that Japanese grammarians label this entire category of forms

as 'indefinites' and not 'interrogatives', thus showing that the indefinite semantic sense is somehow more basic than the interrogative sense.¹

Consider now the specific forms of the interrogative markers involved in the derivation of these indefinite constructions:

jpnse.: /-ka/
 ko.: /-(i)na/; /-(i)tĩnči/
 Ainu: /-ka/; /-neyakka/

It is readily apparent that the alternative Ainu interrogative marker /-neyakka/ can be decomposed into /-ne-yak-ka/ revealing it to be a compounding of interrogative markers:

1. /-ne-/ (section 3.1)
2. /-yak/ (section 6.8.0)
3. /-ka/ (this section)

The similarity between Ainu /-ka/ and Japanese /-ka/ in both form and grammatical function is hard to dismiss as a coincidence. The only puzzle is why Korean would appear to have a unique interrogative marker considering the precise similarity of the Japanese-Ainu reflexes.

Korean has an interrogative marker /-kka/. Although its use does not carry over into the derivation of indefinites as with the case of Japanese and Ainu /-ka/, it would be hard to argue that it is not a cognate form. In addition, Korean has the morpheme /-ya/ in the interrogative sense of 'whether'. Ramstedt (1949:74) considers this Korean form to be cognate with /-ya/ ('id.') in Manchu, Tungus, and Mongolian. Ainu /ya/ 'interrogative marker' (section 2.9.1) has also been hypothesized to be cognate with the Altaic forms. It thus can be hypothesized that all the Ainu interrogative markers are of Altaic origin.

3.2 Plural Formation

As discussed in the Appendix section 6.4.2, nouns in Ainu are normally not inflected for number. However, a plural morpheme /-(u)tar/ does appear in a limited number of cases when the plurality of the noun is being emphasized.

Menges (1968:111) states that the reconstructed plural suffix for common Altaic, */-lar/, is actually a combination of two suffixes: /-l-ar/. Other plural markers exhibited by Altaic languages are /-t/ in Mongolian and Ancient Turkish, and /-ta/ in Tungus and Manchu. Menges (1968:111) also notes that evidence from tribe names suggests that /-t/ as a plural marker survives as a relic in Turkish. It is thus possible to reconstruct an additional plural morpheme, */-t/.

With this information, it is possible to view the Ainu plural morpheme as a combination of the two proto-Altaic plural markers; that is, /-t-ar/. Note that there is nothing irregular in the phonetic development of this form. Proto-Altaic */t/ corresponds to Ainu /t/ (Section 2.2); and Proto-Altaic */r₁/, */r₂/ correspond to Ainu /r/ (section 2.13). The combination of two plural morphemes appears to be a regular Altaic pattern as evidenced by the previously cited Tk. /-lar/. Note also the similarity in both phonetic form and semantic value between Ainu /-(u)tar/ and Korean /-t̃il/. Both function as a plural marker and both have the same restricted usage. It is thus possible to postulate that the Korean and Ainu forms are cognate items, and, further, that they are of Altaic origin.

3.3.0 Case Particles

Section 6.4.3 of the Appendix outlines various postpositions that are used to express case in the Ainu language. Three of these particles appear to have reflexes in Altaic.

3.3.1 Locative

Ainu /ta/ 'locative marker'
 ma. /te/ ~ /-de/
 jpnse. /de/
 mo. /-ta/ ~ /-da/

AT /-ta/ ~ /-da/
 chuv. /-ra/ ~ /-da/ all 'id.'
 jpnse. to- 'site, place' (cf. *koko* 'here'
 soko 'there')
 ko. /t^he/ 'site, place'

3.3.2 Instrumental

Ainu /ani/ 'instrumental marker'
 AT /-yn/
 yak. /-nan/
 chuv. /-än/ all 'id.'

3.3.3 Ablative/Directional

Ainu /or(o)/ 'from the point of'
 ko. /-ro/ 'to the point of (illative
 marker)'
 mo. /-ra/ ~ /-ra/
 tung. /-lā/; /-lĕ/
 Tkc. /-ra/

The sound correspondences posited in chapter 2 support a cognate relationship of these forms for they all illustrate a regular sound development.

Although by no means as supportive of an Altaic origin of the case particles, the lack of a nominative marker in Ainu does offer some similarity with the Altaic languages as this is a regular feature of Altaic (Menges 1968:109).

3.4 Numerals

The lack of similarity among the numeral systems of the various Altaic languages has often been cited as one of the major stumbling blocks of the Altaic theory (Miller 1971:219). Miller (1971:219), on the other hand, maintains that this state of affairs is not at all damaging, being the result of widespread borrowing and a propensity toward numeral taboos such as Japanese *yōji* 'four o'clock' for the expected **shiji*. He furthermore states that simply because the Indo-European languages have a common

numeral system is no reason to impose this characteristic upon other language families.

As shown in the Appendix, section 6.10.0, the Ainu language has a vigesimal numeral system; that is, based on the unit '20'. Thus $40 = 2 \times 20$; $60 = 3 \times 20$ and so on. Traces of such a system are found in the English expression 'score' as well as in the French *quatre-vingt* '80' (lit. '4 x 20'). A further unique principle of the Ainu numerals is that of the operation of subtraction. The numerals from 1 to 5 and the numeral for 10 are basic, with the intervening numerals being formed by subtracting these basic units from the numeral '10'. The numeral '6' is literally expressed as '4 from 10'; '7' as '3 from 10'; '8' as '2 from 10'; and '9' as '1 from 10'. Higher numerals call for the operation of both the vigesimal and the subtraction principles. The number '36', for example, is:

iwan ikasma wan e tu hot ne

(lit. '6 plus (10 from (2 x 20))')

A comparison of the Ainu numeral system with that of Korean reveals certain similarities:

| Ainu | | Middle Korean |
|---------|----|---------------|
| sine | 1 | hana |
| tu | 2 | tul |
| re | 3 | sëy(s)/sëk |
| ine | 4 | nëy(s)/nëk |
| asikne | 5 | tas(ës) |
| iwan | 6 | yës(ës) |
| arwan | 7 | ilkop |
| tupesan | 8 | yëtlëp |
| sinepes | 9 | ahop |
| wan | 10 | yël |

Of note is that the Korean numeral system appears to be based on a similar principle of subtraction of basic numerals from the unit '10'. Miller (1971:243-4) furthers the observations of Ramstedt and Ogura concerning the formation of the numeral '8' by hypothesizing that a similar patterning is evident in the numerals '7' and '9':

- 7: yël '10' + *yu '3' + ëp(s) > *ilkop*
 8: yël '10' + tul '2' + ëp(s) > *yëltëlp*
 9: yël '10' + hōnah '1' + ëp(s) > *ahop*

In this formulation, [ëp(s)] is claimed to be a morpheme meaning 'nonexistence'.

Thus on a typological basis, it would appear that both the Korean and the Ainu numeral systems are similar in that they are both based on subtraction of basic units from the unit '10'.² If Miller's hypothesis is indeed correct, however, it is puzzling that Korean [yël] '10' would have a different development for each of the numerals '7', '8', and '9'--that is, [il], [yël-], and [a-], respectively. It appears that the form for '8' is regular, but that the forms for '7' and '9' are somehow deviant.

Note, further, that despite the fact that both Korean and Ainu numerals are formed on the basis of subtraction, the parallel seems to end at this as the ordering of the elements is different. Ainu lists the basic numeral first and then the unit '10'. According to the hypothesis of Miller and Ramstedt, Korean lists the unit '10' first and then the basic numeral; that is, Korean does the exact reverse of Ainu.

An examination of certain Ainu lexical items allows a tentative hypothesis to be put forward that would both explain why the Korean forms for '7' and '9' appear to be phonetically deviant as well as establish a much stronger typological similarity between the Korean and Ainu numeral systems.

Consider the following paradigm in Ainu:

| | |
|--------|---------------|
| ar-sui | 'one time' |
| tu-sui | 'two times' |
| re-sui | 'three times' |

| | |
|-------------|---------------|
| ine-sui | 'four times' |
| ašikne-sui | 'five times' |
| iwan-sui | 'six times' |
| arwan-sui | 'seven times' |
| tupesan-sui | 'eight times' |
| wan-sui | 'ten times' |

There can be no question that the suffix *-sui* in the above paradigm means 'times'. It thus follows that the *ar-* in the first item cited must be glossed as 'one'. It is possible that this is the original Ainu morpheme for the numeral '1' which has since been replaced by *si-*.

Further to be considered is Ainu *wan* '10' and *hot* '20' as there is evidence that some semantic shift occurred for these items. The Chishima form for '10' is *upis*; in all other dialects of Ainu it is *wan*. By recognizing the Chishima item as the original form for '10', some phonetic anomalies in the explanation of the subtractive nature of the Ainu numeral system are readily clarified. Clearly this original form still remains in the Ainu items *tupesan* '8' and *sinepes* '9'. The */-s-/* in these items is not somehow derived by a phonological rule shifting */-w-/* to */-s-/*. Note, however, that *wan* does occur in *iwan* '6' and *arwan* '7'. There is evidence, furthermore, that Ainu *hot* also carries the meaning of '10'. Consider the following forms from the Sōya and Asahikawa dialects:

| | | |
|------|------------|------|
| | wan(pe) | '10' |
| | hot | '20' |
| but: | inehot | '40' |
| | ašiknehot | '50' |
| | iwan hot | '50' |
| | tupesanhot | '80' |

From this data, it can be seen that *-hot* in all compound forms must be interpreted as '10'. These two dialects thus had a decimal rather than a vigesimal system.

It thus appears that crossdialectal comparison of the Ainu numeral system reveals three competing forms for the numeral '10'; that is, *wan*, *upis*, and *hot*.

With the various Ainu evidence cited earlier, let us now reconsider the Korean system. The first hypothesis that can be made is a reinterpretation of the final morpheme of the Korean items for the numerals '7', '8', and '9'. Rather than [əp(s)] being a morpheme of 'nonexistence', it can now be claimed that it comes from a proto-morpheme for '10', which is tentatively reconstructed as */ups/.

A further comparison can be made between Ainu *ar-*, cited earlier with the gloss '1', and the first segment of Korean *ahop* '9'. It can be assumed that these indeed are the same morpheme; that is */ar-/ '1'. Similarly, a correspondence can be drawn between Ainu *re ~ ar* (cf. *arwan* '7') '3' and the first syllable of the Korean form *ilkop* '7'. It is hypothesized that these both derived from the same form, tentatively reconstructed as */Vr/ '3'.

With the establishment of these correspondences, it can be seen that the Korean system of subtraction now is identical to the Ainu system. In the case of '7' and '9' in Korean, the smaller basic numeral is given first, and the numeral for '10' is given last.

A last remaining problem in establishing a relationship between the Ainu and Korean forms, is the medial consonants in the Korean numerals for '7' and '9'. These can be tentatively related to the Ainu form *hot* '10' '20'. Perhaps it is the case that the two Ainu forms, *hot* and *upis* can be collapsed in one proto-form, */Kops/ '10'. Certainly the Korean forms for '7' and '9' establish some motivation for doing so.

In this manner, it can now be seen that the formulation of Korean *ilkop* '7' and *ahop* '9' is not at all deviant; rather it is *yěltělp* '8' which no longer fits into a regular pattern--an observation which is the exact opposite of what was originally noted on page . By way of possible explanation, it might be the case that Korean, as with Ainu (cf. *arwan* '7' but *tupesán* '8'), employs two distinct morphemes for '10'.

Extending our comparison of numeral systems to other Altaic languages, the following tabulation (Hamp 1970:190) is instructive:

| Number | AT | Chuvash | Bolgar | p-Mong | p-Tungus |
|--------|-------|---------|-----------|----------|-------------|
| 1 | bīr | pēr | bīr | niken | āmün |
| 2 | eki | ikē | eki | qoyar | ǰōr |
| 3 | üč | višē | vüč | gurban | īlan |
| 4 | tört | tāvata | tüät | dörben | dügin |
| 5 | bäs | pilēk | bel, biäl | tabun | tuŋga |
| 6 | altı | ültä | altı | jirguyan | nöŋün |
| 7 | yeti | šičē | jiäti | doluyan | nadan |
| 8 | säkiz | sakār | säkir | naiman | ǰapkan |
| 9 | toquz | tähär | toḡur | yisün | yägün |
| 10 | ön | vunä | van, vān | parban | ǰuwan |
| 100 | yüz | šēr | ǰüz, ǰür | ǰayun | ñamā, tangu |

*/bir-/ (/bīr -/?) has been reconstructed for proto-Altaic '1'.³ With the Ainu reflex established for proto-Altaic */b-/ in Section 2.4, a good match can now be established between this proto-form and Ainu *ar*- '1' and the following development hypothesized:

*bir- > *wir- > *war-(?) > ar-

Ainu *i*- '4' has been listed as item 2.5.4, a direct descendant of proto-Altaic *dō- '4'.

A last item where it appears a comparison can be drawn between an Ainu numeral and a form or forms in the Altaic mainstream is Ainu *wan* '10' which is in basic phonetic agreement with the forms for '10' in the other Altaic languages.

It can be maintained thus that the Ainu language still retains numerals which can be traced directly to proto-Altaic forms.

NOTES

1. Miller (1971:218).
2. Miller (1971:225) notes that it has been hypothesized that traces of a subtractive system exist in Old Turkish *säkkiz* '8' which seems to incorporate the form *iki* '2'.
3. Miller (1971:221).

CHAPTER 4

Evidence Relating Korean, Japanese, and Ainu

4.0 Introduction

Chapter 2 presented phonological evidence supporting the hypothesis that the Ainu language is composed of items of Altaic origin. The purpose of this chapter is to provide a justification for a Korean-Japanese-Ainu subgrouping. Some of the evidence that follows has appeared in chapters 2 and 3. In such cases, the necessary cross-referencing is given. In the majority of cases, however, no cognates other than the given Korean and/or Japanese forms appear. Thus, while the given evidence supports a Korean-Japanese-Ainu relationship, it cannot necessarily be concluded that this relationship represents an Altaic subgrouping. It is for this reason that this evidence is presented in a separate chapter. Martin (1966) and Ramstedt (1949) are the principal sources of data (Japanese and Korean, respectively) for the material that follows.

The arrangement of the data presented here is roughly based on the style of Martin (1966). Martin divided his lexical pairs of Japanese and Korean items into the following three categories:

- I. Those items with a regular phonetic match and a good semantic match.
- II. Those items having an identical semantic match, but only a partial phonetic fit.
- III. Those items with a good phonetic match but somewhat divergent semantics.

To parallel exactly Martin's procedure, however, is impossible since what is being compared in this case is three languages, not two. It is for this reason that such an analysis was not even attempted for the data presented in chapter 2, for the complete membership of Altaic constituted possible sources of data for comparison. To overcome this complication in this chapter, a lexical set will be assigned membership into one of the three categories on the basis of whether either Ainu and Korean, or

Ainu and Japanese meets the requirements just specified. In determining the closeness of the phonetic fit, a certain knowledge of historical development is assumed; namely, Modern Japanese $h < *p$, and Ainu $*p > \phi$.

Each section deals with a unique reconstructed phoneme or phoneme sequence. Following this are the reflexes in the given order of Korean:Japanese:Ainu. Discussion of motivation for the reconstruction as well as a discussion of specific etymologies follows each section.

4.1.0 $*p-$ $p:p:p$

Class I: 4.1.1 Ainu paki 'time'

ko. pak 'id.'
in *tan-pak* 'a single time'
(Ramstedt 1949:183)

4.1.2 Ainu pas^{vc}as 'to run' (Soya Karafuto, Chishima dialects)

oj. pas- 'id.'

4.1.3 Ainu hovo 'anus, vagina'

oj. pötö 'vagina'

4.1.4 (X-ref. 2.1.13)

Karafuto Ainu unci 'fire'
jpnse. fuji 'proper name of a volcano'

4.1.5 (X-ref. 2.1.11)

Ainu uku 'to blow (with the lips'
oj. Fuk- 'id.'

4.1.6 (X-ref. 2.1.7)

Ainu ori 'to dig'
jpnse. hor- 'id.'
Ryukyuan puru 'id.'

4.1.7 Ainu pone 'bone'

ko. ppyë 'id.'
jpnse. hone 'id.'
pĕJ (Martin) *pYenye

- 4.1.8 Ainu po 'a child; diminutive marker'
- ko. -po 'person, fellow'
 cf. mēkpo 'a deaf person'
 nīlbo 'an idler, a lazy fellow'
 jpnse. -po 'person, fellow'
 cf. akanbo 'baby'
 dorobo 'thief'
 noppo 'a tall person'
 sakuranbo 'a cherry'
 oj. wo 'little, small'
- 4.1.9 Ainu piyapa 'water oats'
- ko. pyə < *piya 'rice plant'
 jpnse. hie < piye 'type of barnyard grass'
- 4.1.10 Ainu poro 'large'
- mko. pulo- 'be inflated'
 jpnse. putó- < púto- 'fat'
 ?tappuri 'full, good, solid, ample'
 pKJ (Martin) *pulo
- 4.1.11 Ainu peker 'to be bright' to be light pek 'light, bright' + er ?'
- cf. nupak 'to shine, to sparkle'
 jpnse. pikar- 'to shine'
 pikapika 'to twinkle'
- 4.1.12 (X-ref. 2.1.9)
- Ainu hoš 'leggings'
 ko. posjēn/pēsēn 'stockings'
- 4.1.13 Ainu pira 'cliff'
- ko. pira 'id.'
- 4.1.14 Ainu pira 'open, spread out (adj.)'
- jpnse. hirak- 'to open'

Class II: 4.1.15 (X-ref. 2.1.8)

Ainu hure 'red'
mko. pirk 'fiery'

4.1.16 Ainu -p(e) 'thing'

ko. pa 'the thing, that which,
what'
?jpnse. wa 'topicalization
marker'

4.1.17 Ainu pi 'seed, kernel'

jpnse. po 'ear of grain'
ko. pyē 'rice plant, kernel of
rice'
pKJ (Martin) *pYe

4.1.18 (X-ref. 2.1.1)

Ainu para 'palm of hand'
ko. patak 'sole of foot; palm
of hand'

4.1.19 Ainu pa(ye) 'to go; to proceed'

ko. pālp- 'to tread on; to
walk on'
Ryukyan par[~]war[~]har 'to go'
oj. pap- 'to crawl'

Class III: 4.1.20 Ainu poka 'by some means or
other; somehow'

jpnse. hoka 'other'
ko. pakk < pask 'id.'
pKJ (Martin) *póska

4.1.21 (X-ref. 2.1.10)

Ainu hu 'fresh'
ko. phul 'grass'

4.1.22 Ainu aram[~]harm[~]hariyam 'lizard'

jpnse. hebi 'snake'
oj. hami 'poisonous snake'
Ryukuan habu 'id.'
ko. pām < poy'yam 'snake'

4.1.23 Ainu *par* ~ *car* 'mouth'

oj. FoFo 'cheek'
 ko. pol 'id.'
 pKJ (Martin) *pol

Discussion:

- 4.1.1 As there is no alternation in any of the reflexes, there is no question about the reconstruction of pKJA *p-.
- 4.1.2 If Ainu *pas* were a borrowing from Old Japanese, then it would be expected to be in the contiguous dialect (that is, Hokkaido). Because this is not the case, a borrowing relationship from Japanese into Ainu seems doubtful. Unexplained, however, is the [p] ~ [c] alternation in the Ainu form. Note that the same alternation appears in 4.1.23, Ainu *par*~*car* 'mouth'.
- 4.1.4 Although the Ainu form has a nasal consonant and the Japanese form does not, this set is still included in category I as it is assumed that prenasalization of obstruents existed at an earlier stage of Japanese (Miller 1967: 220-4). Further, note that *unci* appears in the Karafuto dialect only, thus making a borrowing relationship more difficult to maintain.
- 4.1.9 Chiri (1954:155) derives the Ainu form as 'fat-grass'; the semantics of which bears no relation to reality. The hypothesis given here is that Ainu *piya* refers to a specific type of plant.
- 4.1.21 Although the semantic match between 'fresh' and 'grass' appears to be quite poor, a comparison with the Altaic cognates cited in 2.1.10 suggests that 'fresh' can be taken as the meaning of the proto-form. Thus Korean has undergone a semantic shift with this item whereas Ainu has preserved the original meaning.
- 4.1.22 The presence of [-r-] in the Ainu form suggests a reconstructed pKJA *pɔyrm(am).

4.2.0 *R- (?) p:p:r

Class I: 4.2.1 Ainu ra 'blade of grass'

jpnse. ha 'leaf of a plant'

4.2.2 Ainu ruyé-rué 'thick, large'

ko. pu¹/t- ? < *pīl 'swell,
increase'pulī- < mko. pīlīl- 'be
full, inflated'

jpnse. pūy(e)- 'swell, grow'

puyās- 'increase it'

pKJ (Martin) *pōř-

4.2.3 Ainu rit 'sinew, tendons'

jpnse. hiĵi 'elbow, arm'

??ko. ppi-(da) 'to dislocate,
to put out of
joint'

4.2.4 Ainu ru 'ice'

jpnse. fuyu 'winter'

ko. purīlīl 'to be shivering,
chattering'

4.2.5 Ainu rek 'beard'

jpnse. hige 'id.'

4.2.6 Ainu rek-(te)- 'to play a musical instrument'

jpnse. hik- 'id.'

Class II: 4.2.7 Ainu rap 'feathers'

jpnse. ha 'id.'

cf. hane 'id.'

haoto 'flapping of wings'
(<ha 'feathers' + oto
'sound')4.2.8 Ainu rar 'edge of a sword
guard'

ko. ha 'edge, blade'

4.2.9 Ainu rara 'naked'

jpnse. hada 'skin, bare'
 cf. *hadaka* 'naked'
 hadasi 'barefooted'
 ok. patta 'to take off; to
 strip off; to make
 naked'

4.2.10 Ainu rára 'to make fun of, to mock'

ko. patčhi 'a clown; an actor'
 jpnse. wara- 'to laugh'

4.2.11 Ainu rarí 'to press down on'

jpnse. har- 'to stick; affix'
 ko. pari- 'to plaster, to
 paste on, to anoint'
 pKJ (Martin) *pár-

4.2.12 Ainu raš 'to chip, break off'

 raš-ke 'to shave'
 jpnse. hasam- 'to clip; cut
 off'
 ko. pasjě- 'to crumble; to go
 to pieces'

4.2.13 Ainu ratpo 'a bunch of any-
thing'

(<*rat* 'bunch' + *po* 'di-
 munitive')

ko. pari 'a numerative of loads
 for beasts of burden'

4.2.14 Ainu réra 'wind'

??jpnse. hirahira 'to flutter,
 to flap in the wind
 (onom.)'
 ko. param 'wind'

4.2.15 Ainu reyé 'to creep, to crawl'

jpnse. har- < *haw- 'id.'

4.2.16 Ainu rur 'the sea'

ko. pada < *parar 'the sea, the
 ocean'

- Class III. 4.2.17 Ainu rori 'head of a water
current in a river'
jpnse. hori 'moat, canal ditch'
- 4.2.18 Ainu ri 'high'
cf. rik 'above'
rikop 'a star' (lit.
'above-thing')
riwak 'to burst forth
from above as the
sun from the
clouds; the shin-
ing forth of the
sun' (Batchelor
1938:425)
jpnse. hi 'the sun'
??ko. pjël 'a star'
- 4.2.19 Ainu ra 'below, under'
jpnse. her- 'to decrease'
ko. pat 'the outside; the ex-
terior'
- 4.2.20 Ainu rak 'to smell of'
jpnse. hak- 'to emit; send
forth'
ko. pak- 'to kick; to kick out;
to drive off'
- 4.2.21 Ainu rat 'to feel disappointed;
to miss (something)'
ko. pari 'to be short; lacking'
- 4.2.22 Ainu retár 'white'
ko. pjët 'light of the sun (as
opposed to the
shade); sunshine;
brightness'
- 4.2.23 Ainu rasu 'to meet as the end
of rafters at the
top of a roof'
oj. hazu 'arrow notch'

Discussion:

- 4.2.0 Ainu /r-/ clearly corresponds to Japanese /h/ < */p-/ and Korean /p-/. It is highly unlikely that fortuitous correspondences could be so numerous. Recall now that, as far as is known, proto-Altaic had no word-initial liquids (Section 2.13). All instances of the occurrence of liquids were internal. Ainu, however, does not have this restriction, and, unlike the Altaic languages (Japanese and Korean included), a representative part of the Ainu lexicon is /r/-initial. If Ainu is indeed Altaic, these word-initial occurrences of /r-/ must be derivable from a source other than Altaic proto-liquids. The only other possibility would be to maintain that /r/-initial segments in Ainu were at one time in the medial position. There is no motivation for this in the data given.

The question now is what to hypothesize as the proto-form underlying this reflex set. As */p-/ has already been reconstructed as the proto-phoneme for reflex set 4.1.0, it cannot be used again here. There is no environmental conditioning which would determine when */p-/ would remain /p/ in Ainu, in one case, but would shift to /r/ in another.

It should be noted that /p/ and /r/ have little in common phonetically other than they are both consonants. Thus the most facile reconstruction for this reflex set would be a consonant cluster */pr-/. It would then be maintained that the cluster was simplified by dropping the first consonant in the development of the Ainu language but the second in the development of Japanese and Korean. It should be noted, however, that neither present-day Japanese or Ainu permit consonant clusters, and thus this reconstruction would hypothesize a more complex canonical structure at this earlier stage. Although this is most certainly possible, for that matter, why not reconstruct */rp-/? In short, this reconstruction seems arbitrary and unmotivated.

Another possibility is to claim a $*/p_1-/$ and $*/p_2-/$ as existing in the protolanguage and to maintain that $*/p_1-/$ remained $/p-/$ — hence reflex set 1 — but that $/p_2-/$ surfaced as $/r/$ in Ainu. While clearly the nature of this is correct, it is stating nothing about what the phonetic value of what $*/p_2-/$ might have been. It would be just a cover symbol and thus it would be equally acceptable to say $*/P/$ or even $*/X/$.

Thus none of these possibilities seems very satisfying. As there is no $/d:d:d/$ reflex set in the Japanese:Korean:Ainu data, $*/d-/$ would seem a possibility as a shift from $/d/$ to $/r/$ is phonetically plausible. However, as stated in section 2.5.0 herein, convincing arguments have been established for the development of Altaic $*/d-/$ in Japanese. It had a varied development depending on the element or elements following, but $/p/$ was never a possibility. This, too must be ruled out.

Evidence cited in Unger (1975) supports the hypothesis that $/r/$ may have existed as an acceptable initial segment in proto-Japanese. Unger (1975:32-33) lists the following alternations where the second form of each set appears to be formed by reduplication of the first syllable of the first item. Consider:

wogam- 'bow' ~ worogam- 'to revere'
 utape- 'appeal' ~ urutape 'id.'
 name- 'line up' ~ narabe- 'id.'
 i- 'mint, cast' ~ ir- 'scorch'

Unger concludes that a reconstructed $*/r/$ initial segment would then explain the second items as being formed by exact reduplication of the first syllable. It is thus maintained that this $*/r-/$ developed into a $/w-/$, that is, a bilabial segment. The parallel here with the Ainu reflex is now quite exact as $/p/$ is also bilabial. I will thus reconstruct $*/R-/$ as the proto-phoneme underlying reflex set $/p:p:r/$. Clearly, however, if the items in this section are to be of Altaic origin, this $/R-/$ must have been a subsequent development of some other proto-Altaic segment. Note also reflex set 4.19 where $/r-/$ has been reconstructed.

- 4.2.1 Note that Ainu *ham* 'leaf of a tree' could also be cognate with the cited Japanese form. The lack of the nasal in the Japanese form, however, would then be problematic.
- 4.2.4 Ainu *ručup* is composed of *ru*, presumably of uncertain meaning, and *čup*, readily identified as 'moon'. The etymology is now explained as the month of 'cold' or 'ice'. The final syllable of Japanese *fuyu* seems problematic, however, as it has no reflex in the Ainu form. Compare this with Japanese *tsuyu* 'rainy season', however, and a possible etymology presents itself. Interpreting /-yu/ to mean 'season' or 'time of', *fuyu* can now be decomposed into 'cold-time'; and its composition is similar to that of the Ainu word.
- 4.2.12 Modern Ainu also has *hasami* 'scissors' which appears to be a direct and recent borrowing from Japanese.
- 4.2.18 Martin (1965) cites Korean *pjël* 'star' as being cognate with Japanese *hosi* 'id.' and posits pKJ *pYešyi.

4.3.0 *t- t:t:t

Class I: 4.3.1 Ainu *tara* 'an appendage; affixed to; holding on to; dangling from'

ko. tal- < tɔl- 'hang'
jpnse. tur-, tur(e), turus-
'hang it up; balance it out'
pKJ (Martin) *tɔr-

4.3.2 Ainu -utar 'plural marker'
(<u 'reciprocal marker'
+ tar 'plural marker')
(ref. section 3.2)

ko. -til 'plural marker'

4.3.3 (X-ref. 2.5.10)

Ainu *tura* 'with, accompanying'
ko. teli- < tali- < tɔli-
'accompany'

jpnse. tur(e)- 'id.'
pKJ (Martin) *tɔry-

Class II: 4.3.4 Ainu topseʋtupse 'to spit'

jpnse. tuba 'spit'
ko. čum 'id.'
pKJ (Martin) *cxumba

4.3.5 (X-ref. 3.3.1)

Ainu -ta ~ -te 'locative
marker'
ko. thë 'site, place'
jpnse. to(ko) 'id.'
pKJ (Martin) *tɔ

4.3.6 Ainu turu 'dirt, earwax'

ko. ttä 'dirt'
tëlä^w, -tala^w 'be muddy'
jpnse. doro 'mud'
pKJ (Martin) *ter(e)

4.3.7 (X-ref. 2.2.7)

Ainu tem 'arms'
ko.tëbir- 'grasp the arm; to
lead, to guide'

4.3.8 (X-ref. 2.2.2)

Ainu tukʋtok 'to extend up-
ward, to arise, to
come up, to project'
oj. tog- 'to protrude'

4.3.9 (X-ref. 2.2.4)

Ainu toy 'earth'
jpnse. tuti 'id.'
ko. tutuk, tutëng 'bank, levee,
ridge'
pKJ (Martin) *tut(i)

Class III: 4.3.10 (X-ref. 2.2.1)

Ainu tuš 'animal pelt'
 ko. turumagi < *tulumaki
 'cloak'

4.3.11 (X-ref. 2.2.5)

Ainu to 'lake'
 jpnse. minato 'harbor, port'
 <mina '?' + to 'body of water'
 (Hagenauer 1956:408)

4.3.12 Ainu tek 'hand(s)'

koguryę tek 'ten'

Discussion:

4.3.0 Because there is no alternation in any of the reflexes, there is no question about the reconstruction of pKJA *t-

4.3.9 The Ainu evidence suggests that the brackets are no longer necessary in Martin's reconstruction; thus, *tuti in place of *tut(i).

4.4.0 *c- c:t:t

Class II: 4.4.1 Ainu tus 'rope'

tu 'a line, a bow string'
 jpnse. turu 'string, cord'
 ko. cul 'id.'

4.4.2 (X-ref. 2.5.3)

Ainu tovtotto 'breasts'
 jpnse. titi 'id.'
 ko. cęc 'id.'
 pKJ (Martin) *cyic(yi)

4.4.3 (X-ref. 2.2.6)

Ainu tok- 'to peck (as a bird)'
 jpnse. tuk- 'to pierce, to
 prick'
 ko. ččo- 'to peck, to peck
 out'

- 4.4.4 Ainu to 'that'
 oj. sō 'id.'
 ko. čō 'id.'
- 4.4.5 Ainu tu 'verbal intensifier'
 ko. čit (stressed čait, čät)
 'id.'
- 4.4.6 Ainu (h)očaki 'diarrhea'
 (<ho 'anus' + čaki)
 ko. čiči- 'id.'

- Class III: 4.4.7 Ainu tak 'short'
 ko. čak- 'to be small'
- 4.4.8 Ainu teine 'to get damp;
 wet'
 ko. cin- 'to be soft; to be
 watery, wet'
- 4.4.9 Ainu tara 'a dream'
 ko. čōl- 'to be sleepy,
 drowsy'
- 4.4.10 Ainu tum 'strength'
 ko. cum 'the fist'

Discussion:

- 4.4.6 Chiri (1954:237) derives Ainu (h)očaki as
 o 'anus' + čak 'onomatopoeia' + o 'to do'.
 The cognate set presented here suggests that
 this derivation is incorrect.

4.5.0 *čY- č:t:č

Class I: 4.5.1 (X-ref. 2.8.7)

- Ainu čuk 'autumn'
 čukpa 'id.'
 (<čuk 'autumn' + pa
 'season, time')

ko čuk- 'to die; to expire;
to be weak'

Class II: 4.5.2 (X-ref. 2.8.4)

Ainu ci 'penis'
ko. cājɪ 'id.'

4.5.3 (X-ref. 2.8.5)

Ainu cik 'time, when'
ko. cēk 'id.'
jpnse. toki 'id.'
pKJ (Martin) *cekyi

Class III: 4.5.4 (X-ref. 2.8.3)

Ainu čiw 'river current, ti-
dal current'
??ko. čolčol 'bubbling; flow-
ing; running
of water' (onom.)

Discussion:

4.5.1 Chiri does not offer a derivation for this item. Taking into account the Korean form, Ainu čukpa is readily (and credibly) analyzed as 'dying time'.

4.6.0 *j- č:-:y

Class II: 4.6.1 Ainu yak 'interjection; ex-
pression of disgust'
(<ya 'interrogative mark-
er' + k)

ko. čjakhi 'is it not so?;
indeed!'

Class III: 4.6.2 Ainu yar 'to tear, to rend'

yasa 'id.'
ko. čari- 'to cut off, to
squeeze apart; to
extort'
??jpnse. tat- 'id.'
pKJ (Martin) *cāl-

4.6.3 Ainu yom 'to shrink'

ko. čom 'a little, a few,
some'

4.6.4 Ainu yorun 'to beg'

ko. čori- 'to annoy; to pes-
ter; to tease'

4.6.5 Ainu yaku 'tribute paid in
furs or fish; a
tax'

ko. čagä, čägä 'mother of
pearl; value;
valuable; valued
article'

4.7.0 *pc-?? p:p:č

Class I: 4.7.1 (X-ref. 2.2.12)

Ainu či- 'wild; untamed'
ko. pi- 'id.' (Ramstedt 1949:
200)

Class II: 4.7.2 Ainu časi 'a fence, a wall'

ko. param 'a wall'

Class III: 4.7.3 Ainu čaipuni 'a large boat of
Japanese make; a
cargo boat'
(<čai + puni (jpnse.)
'boat, ship, junk')

jpnse. he < *pai 'ship'
cf. *hesaki* 'bow of a boat or
ship'
(<he 'ship' + saki 'tip,
end')

4.7.4 Ainu čotca 'to sting'

ko pël 'bee'
oj. pati 'id.'
pKJ (Martin) *pal(y)i

Discussion:

- 4.7.1 The Korean data offers further indication that Chiri's etymology (refer to discussion of 2.2.12) is in error.

4.8.0 *pX- č:-:p

Class I: 4.8.1 Ainu pi 'animal fat'

ko. čī- 'fat, fleshy'

Class II: 4.8.2 Ainu patče 'to fly about as snow or dust or spray; to explode as a volcano'

ko. čaʃirë(tterida) 'to give a start; to jump with fear'

Discussion:

- 4.8.0 As only two sets illustrate this correspondence, the phonetic reconstruction cannot be defended in detail. The [X] thus represents some unspecified, arbitrary element.

4.9.0 *s- s:s:s

Class II: 4.9.1 Ainu sus 'to bathe'

ko. sis 'to wash'
oj. sösög- 'id.'

4.9.2 Ainu siw 'to be bitter tasting'

ko. sī 'acid, vinegar'
jpnse. su 'id.'
pkJ (Martin) *sɔ

4.9.3 Ainu -sok 'breathe (out)'

cf. *mausok* 'to yawn'
(<mau 'breath, air'
+ sok)

- ko. sak- 'to exude, to efferve-
 vesce'
 ssak ssak 'breathing
 heavily (ono-
 mat.)'
- 4.9.4 Ainu samampe 'flatfish; tur-
 bot'
- ko. sam-chi 'mackerel'
 jpnse. saba 'id.'
 pkJ (Martin) *samb(a)
- 4.9.5 Ainu sime 'to dye using tree
 bark'
 (Soya dialect)
- ko. simi- < *simiy- 'to per-
 meate it'
 jpnse. som(e) 'dye it'
 pkJ (Martin) *somy-
- 4.9.6 (X-ref. 2.7.3)
- Ainu sir 'to polish'
 ko. söl 'brush'
 jpnse. sur- 'to rub; to grind'
- 4.9.7 (X-ref. 2.7.10)
- Ainu sippo 'salt, brine'
 oj. siwo 'id.'
- 4.9.8 (X-ref. 2.7.16)
- Ainu sa 'a space; an inter-
 val'
 ko. sai 'id.'
- 4.9.9 Ainu soya 'bee'
- ko. ssoa 'a bee's sting'
- 4.9.10 (X-ref. 2.7.17)
- Ainu saye 'a coil of rope'
 ko. saräi 'one round, one
 turn (said of
 ropes or similar
 things)'

- 4.9.11 Ainu susu 'willow'
jpnse. susu 'pampas grass'
- 4.9.12 Ainu cisurap '3-year-old
bear'
ko. sę '3'
sęrop, sarop 'in its 3rd
year (said
of animals)'
- 4.9.13 (X-ref. 2.7.4)
Ainu siri 'instead of, in
place of'
ko. sęro 'each other, mutual-
ly'
- 4.9.14 (X-ref. 2.7.15)
Ainu serema 'a guardian;
health, life,
well-being'
ko. sari- 'to be careful of
oneself, to be
anxious about one-
self'
- 4.9.15 (X-ref. 2.7.20)
Ainu sęsmau 'a 4-year-old
buck'
ko. sasım 'a stag, a deer'
- 4.9.16 (X-ref. 2.7.6)
Ainu sikes- 'to ill treat,
speak against,
scold'
jpnse. sikar- 'to scold'

Class III: 4.9.17 Ainu sai 'a flight of birds'

mko. -sai 'bird'
cf. hansai 'crane'
harmisai 'wagtail'
satesai 'cormorant'

jpnse. -su 'bird'
cf. karasu 'crow'
uguhisu 'bushwarbler'.
kigisu 'pheasant'

4.9.18 Ainu si- 'true, very, great,
main, chief'

ko. si- 'id.'

cf. siskama 'pitch black'
sinnoratha 'bright
yellow'
sippolgatha 'bright
red'

Discussion:

4.9.4 As the reflex in all three languages is [s], here is no question about the reconstruction of pKJA *s.

4.9.4 Chiri (1954:23) derives Ainu *samampe* from a combination of the morphemes *saman* 'lie down' and *-pe* 'thing'. The resulting phonetic match is, of course, very accurate, but the semantics of the resulting combination is completely unacceptable. Only by an extreme flight of the imagination can a turbot be envisioned as a 'lying down thing'. The Korean and Japanese forms suggest that an explanation in the direction of Chiri's etymology is unwarranted as **sama(m)* can be reconstructed as the morpheme for 'turbot/mackerel'.

4.9.12 This cognate set further supports the hypothesis of 2.2.12 whereby 'ci-' is interpreted as a prefix meaning 'wild creature'. By removing this prefix from the Ainu form, we have a direct phonetic match with the Korean item.

4.10.0 *tsY-?? č:s:s

Class I: 4.10.1 Ainu sama 'to lie along; to
lie stretched out'

ko čam 'to lie abed; to lie
down'

ča- 'to sleep'

4.10.2 Ainu sapke 'to try the taste
or flavor of any-
thing'

ko. čapsu- 'to eat; to drink;
to partake (ho-
nорific)'

Class II: 4.10.3 (X-ref. 2.7.14)

Ainu se 'to carry on the
back'

ko. či- 'id.'
jpnse. se/so 'back'
pKJ (Martin) *tsye

4.10.4 Ainu sorma 'a kind of
edible fern'

ko. čol 'id.'

4.10.5 Ainu sar 'tail'

ko. choli; kkoli 'id.'
jpnse. siri 'backside; the
hips'

Class III: 4.10.6 Ainu širen 'to lead away;
to entice; to
lead to; to
take with one
(used both in a
good and evil
sense'

ko. čirě- 'a short way; the
direct way'

4.10.7 Ainu sir 'the weather'

ko. čiri'(ptě-) 'to be
cloudy'

4.11.0 *s₁- s:-:hClass I: 4.11.1 Ainu haro 'fat (adj.)'

ko. sal 'to be fleshy; to
be fat'

Class III: 4.11.2 Ainu hok 'to buy'

ko. sak 'wages, pay, hire,
salary'

4.11.3 Ainu hai 'a large-leafed
nettle'

ko. sä < *säi 'a variety of
coarse reed
grass; hay'

4.11.4 Ainu hanko 'navel, umbili-
cal cord'

ko. sam 'id.'

Discussion:

4.11.0 Section 4.9 demonstrated that the regular reflex of pKJA *s- was Ainu [s-]. In the present case, however, the Ainu reflex is [h-] and thus a unique element must be reconstructed. */S₁-/ is an arbitrary symbol used to designate this element.

4.12.0 *s₂- h:-:s

Class I: 4.12.1 Ainu ser 'to catch the
breath'

ko. hël(ttërgërida) 'to pant,
to puff, to breathe
heavily'

hël hël 'with heavy panting
(onomat.)'

cf. tung. ërī- 'to breathe'
go. ëri-si- 'to pant'

Class III: 4.12.2 Ainu sirar 'the tide'

ko. hīrī(da) 'to flow, to
glide, to run
(as water)'

cf. tkc. süz 'to flow, to
swim with the
water on the
surface'

Discussion:

4.12.0 The reflexes here are the opposite of those in 4.11. It is interesting to note that no putative Japanese cognate forms can be found for either of these two sets. As 4.11 involves a development only before front vowels, it might be possible to collapse these two sets and posit one unique proto-form for both cases. The data base is relatively limited, however, and I have decided to keep these two sets separate.

4.13.0 *k- k:k:k

Class I: 4.13.1 Ainu kumi 'mold, mildew'

ko. kom(phangi) 'id.'
jpnse. kabi 'id.'
pKJ (Martin) *kwombyi

4.13.2 (X-ref. 2.3.12)

Ainu kap 'skin, bark, outer cover'
ko. kap 'covering, container'
jpnse. kaFa 'skin, bark'
pKJ (Martin) *kap(a)

4.13.3 (X-ref. 2.3.16)

Ainu koro 'while, when'
jpnse. koro 'id.'

4.13.4 (X-ref. 2.3.21)

Ainu kur 'shadow, dark'
ko. kur- 'id.'
jpnse. kur- 'id.'

4.13.5 (X-ref. 2.3.9)

Ainu -kar- 'family; relative'
cf. *karku* 'nephew'
matkarku 'niece' (*mat* 'female')
ahupkar 'to marry'
(*<ahup* 'to enter' + *kar* 'family')

oj. -kara 'family' (ref.
Miller 1967:76)
ko. kyēle < kyēlɔy 'race,
genetic stock'

4.13.6 Ainu kamui 'God'

oj. kamī 'id.'

4.13.7 Ainu kačiu 'to spear (trans.),
to pierce'

mko. koc 'skewer'
jpnse. kusi 'id.'
pKJ (Martin) *kutsyi

4.13.8 Ainu ko 'counter for days'

oj. kē 'id.'

4.13.9 Ainu kamu 'to be placed upon;
to cover; to over-
shadow'

jpnse. kabur- 'to put on, to
cover'

Class II: 4.13.10 Ainu kusu 'because'

ko. kēs 'thing'
jpnse. koto 'id.'

4.13.11 Ainu hacikonkon 'spider'
(Soya)

hacikonkom 'id.'
(Karafuto)

ko. komii 'id.'
jpnse. kumo 'id.'
pKJ (Martin) *komo

4.13.12 (X-ref. 2.3.15)

Ainu kararak 'type of crow'
(*Corvus corone*
orientalis)'

ko. kač'ičak 'crow'
jpnse. karasu 'id.'

Class III: 4.13.13 (X-ref. 2.3.1)

Ainu kir- 'fat'
ko. kalbi 'ribs'

4.13.14 Ainu kero 'sea urchin'

ko. kul 'oyster'
jpnse. kaki 'id.'
pKJ (Martin) *kwalgyi

4.13.15 Ainu kar 'type of elm tree'
(also used to mean 'tinder')

ko. kal 'oak'
jpnse. kasi 'id.'
pKJ (Martin) *kašyi

4.13.16 (X-ref. 2.3.19)

Ainu kuy 'to chew'
jpnse. kui- 'to bite into;
to eat'

4.13.17 (X-ref. 2.3.4)

Ainu kema 'foot'
jpnse. kubo 'heel'

4.13.18 Ainu ker 'shoe'

ko. kër- 'go, walk, pace back
and forth'
jpnse. ker- 'to kick'

4.13.19 (X-ref. 2.3.5)

Ainu kéwre 'to shave it, to
whittle it, to
plane it'
ko. kal- 'whet, grind'
jpnse. kir- 'to cut'
pKJ (Martin) *kyor-

4.13.20 (X-ref. 2.3.10)

Ainu kasu 'a ladle, a large
spoon'
oj. kasiFa 'vessels for eat-
ing and drinking'

- 4.13.21 (X-ref. 2.3.11)
 Ainu kam 'muscle'
 ko. kuṇduji 'buttocks'
- 4.13.22 (X-ref. 2.3.13)
 Ainu kar 'to peel, drill fire'
 ko. kalk- 'grate, scrape'
- 4.13.23 (X-ref. 2.3.20)
 Ainu kut 'throat'
 ko. kut 'opening, mouth'
 jpnse. kuti 'mouth'
 pKJ (Martin) *kutyi/kusyi
- 4.13.24 (X-ref. 2.3.18)
 Ainu kotan 'village, town'
 ko. kot 'place, locality, site'
- 4.13.25 (X-ref. 2.3.6)
 Ainu kes 'the end, the finish'
 cf. *tokes* 'the end of the
 day, i.e., even-
 ing'
 ankes 'the end of the
 night, i.e.,
 early morning'
 jpnse. kisi 'shore, brink'
 ko. ka < kas < kəs < *kəc 'id.'
 pKJ (Martin) *kyətsyi
- 4.13.26 Ainu kina 'a general name for
 grasses and herbs
 of the larger kinds'
 ko. kīm 'weeds'
- 4.13.27 Ainu kom 'the knuckles; a knob;
 hillock, knotty,
 knobby'
 jpnse. kobu 'a wen; a swelling;
 a lump, a knot, a
 knob'
- 4.13.28 (X-ref. 2.3.7)
 Ainu kere 'divided, split'

ko. kalü- 'splits, cuts in 2
severs, divides,
parts'

Discussion:

- 4.13.0 There is no question about the reconstruction of pKJA *k-, because the reflex is the same in all three languages.
- 4.13.10 The semantic match with Ainu *kusu* 'because' is plausible, because both the Korean and the Japanese forms may be used to mark reason, cause, or motivation.
- 4.13.11 Chiri's etymological dictionary offers no explanation of the etymology of Ainu *haci-konkon/hacikonkom* 'spider'. It is possible that the reduplicated morpheme is cognate with the Korean and Japanese forms. If this is the case, this form is of particular interest as, if it is a borrowed item, it should appear in the Hokkaido dialect. It appears, however, in the noncontiguous Karafuto dialect.
- 4.13.12 Chiri (1954:179) derives Ainu *kararak* 'type of crow' as onomatopoeic from the sound of the crow's cry. The resemblance with the Korean and Japanese forms, together with the Altaic items, however, suggests that there may be a unique morpheme for 'crow' which is shared by all these languages. The English word 'crow', however, also appears to be 'cognate' with these forms, but it would be foolish to venture that the English and Ainu forms are indeed cognate. This, therefore gives credence to the view that there may be some linguistic universal factors in regard to onomatopoeia, and the resemblance of the word for 'crow' in many languages of the world may be a result of these factors. For this reason, Chiri's view that this item is of onomatopoeic origin may be correct.

4.14.0 *K₁- h:k:k

Class II: 4.14.1 Ainu ha 'empty'

ko. kophu- < kophĩ < kol-
pho 'be empty'

jpnse. kara 'id.'
pKJ (Martin) *kwɔr(?x)(a)

4.14.2 Ainu hura 'smell'

hura-at 'to stink'
ko. koli-, kuli- 'be smelly'
jpnse. kusa- 'id.'
pKJ (Martin) *kušya-

4.14.3 Ainu am 'finger or toenail'

ko. khom < ?*kum 'finger-
nail'

Discussion:

4.14.0 As the regular Korean reflex of pKJA */k-/ is /k-/ in Ainu (section 4.13), an arbitrary element, *k₁-, has been reconstructed for this category.

4.14.3 The match here implies an earlier Ainu form *ham.

4.15.0 *m- m:m:m

Class II: 4.15.1 (X-ref. 2.10.4)

Ainu mo- 'water'
cf. *mosir* 'island'
 < *mo* 'water' + *sir*
 'land'
ko. mul < *mur < *mör 'water'
jpnse. midu 'id.'
pKJ (Martin) *myaldu

4.15.2 (X-ref. 2.10.6)

Ainu moro 'house'
Silla mari 'elevated place
 in a house'
oj. muro 'protecting shed,
 house, cave'

4.15.3 (X-ref. 2.10.7)

Ainu mun 'a drop (of water);
 a ball'
ko. muṅ 'ball'

- 4.15.4 Ainu mui 'to tie; to wrap;
to make into a
bundle'

ko. mǎi- ~ mǎi- ~ mǎ- 'to
tie, to wrap'
jpnse. mak- 'id.'
pKJ (Martin) *mǎx(y)-

- 4.15.5 Ainu mat 'woman, female'

jpnse. -me 'id.'
cf. *musume* 'daughter'
mesu 'female'
hime 'princess'

- 4.15.6 (X-ref. 2.10.2)

Ainu mempiru ~ mempiro 'a
kind of wild onion'
ko. manĭl 'garlic'

Class III: 4.15.7 Ainu mure 'a pair'

ko. muri 'a company, a num-
ber of, an ending
marking plurality
jpnse. mure 'a group, a
crowd
pKJ (Martin) *mur(ye)

- 4.15.8 Ainu mak- 'to withdraw, go
back'

ko. mak- 'block, obstruct,
hold off, pre-
vent, defend
against'
jpnse. mak(e)- 'be de-
feated'
makas- 'defeat, van-
quish, beat'
pKJ (Martin) *mak-

- 4.15.9 Ainu muk 'stopped up, bung-
ed up'

ko. muk- 'to stay, to re-
main; to be old,
to be stale'

- 4.15.10 (X-ref. 2.10.5)
 Ainu manka 'strong'
 ko. mango 'eternity'
- 4.15.11 (X-ref. 2.10.1)
 Ainu mim 'flesh of fish'
 oj. mi 'flesh, fruit'
 ko. mom 'id.'
 pKJ (Martin) *myom
- 4.15.12 Ainu mose 'nettle'
 jpnse. musu 'id.'
- 4.15.13 Ainu menas 'southern/eastern
 wind'
 jpnse. minami 'south'
- 4.15.14 Ainu minowa 'rims of hills,
 mountain edges'
 jpnse. mine 'peak'
 ko. me < mëy < mo(y)h 'moun-
 tain'
 pKJ (Martin) *myonyex
- 4.15.15 Ainu mena 'pond, lake'
 cf. mintuču 'mythical wa-
 ter creature'
 jpnse. mina- 'water'?
 cf. mina-kami 'upper
 courses of a river'
 minagiru 'to overflow'
 minawa 'bubble'
 minage 'to drown one-
 self'
 minato 'port'
- 4.15.16 Ainu mori 'a little hill, a
 slope'
 jpnse. molo 'mountain'
 pKJ (Martin) *moryo
- 4.15.17 Ainu mui 'winnow (n.)'
 oj. mui 'id.'
 ??mugi 'wheat'

Discussion:

4.15.0 The reflex is the same in all three languages,
and there is no question about the reconstruction
of pKJA *m-.

4.16.0 *b- ?? m:m:w > ø

Class I: 4.16.1 Ainu ok 'the neck; the nape of
the neck'

ko. mok 'the neck, the throat'
jpnse. muk- 'to turn one's
head, face etc.'
pKJ (Martin) *muk-

Class II: 4.16.2 Ainu u- 'no, not'

cf. *utek* 'not to know'
uwa 'id.'
ko. mot < *mō- 'not, impos-
sibly'

4.16.3 Ainu oa- 'very'

ko. mǎu, mǎo 'id.'

4.16.4 Ainu ota ~ osa 'sand'

ko. mora ~ mosa 'id.'

Class III: 4.16.5 Ainu wan 'ten'

ko. mǎn 'amount, size, meas-
ure, worth'
??on 'hundred'

4.16.6 (X-ref. 4.15.1, 2.10.4)

Ainu wor- 'water'

cf. *worun-cikap* 'duck'
(lit. 'water-in'bird')
worumpe 'harbor seal'
(lit. 'water-in' thing')
woro ('damp, wet, soft-
ened by wetting')
ko. mul 'water'

Discussion:

- 4.16.0 Perhaps this category can be subsumed into section 4.15 by maintaining that there is a tendency for the bilabial nasal to lenite to [w] before back vowels. As there are many items in 4.15 that have back vowels, however, I feel that it is safer to posit a unique proto-form.
- 4.16.4 Note that a very similar alternation is found in both Ainu and Korean.
- 4.16.6 Note that Ainu *mo-* was cited (4.15.1) as being cognate with Korean *mul*, Japanese *midu* 'water'. This would suggest a different etymology. It could also be maintained that the two Ainu forms represent different stages of the same morpheme; that is, the original bilabial nasal has for some reason been preserved in the form *mosir* 'island', but has lenited to [w] in the other cases. Note further that both the Ainu forms *mo-* and *wor-* are not the regular morphemes for 'water' and that they occur in an extremely limited number of compounds as bound morphemes. The Korean and the Japanese forms, however, are the regularly used forms for the morpheme 'water'.

4.17.0 *w- w > φ:w > φ:w

Class III: 4.17.1 Ainu wara 'the youngest'

warapo 'young child'
 ko. ol 'young' < *or, *ol
 'male child'??

4.17.2 Ainu wakka ~ akka 'water'

jpnse. aka 'bilge water'

4.17.3 Ainu wen 'bad, adverse, evil'

ko. oin 'left side, reverse,
 wrong'
 north ko. wän, wen 'id.'

4.17.4 Ainu apapu 'to apologize'

oj. wabi 'apology'

4.18.0 *n- n:n:n

Class I: 4.18.1 (X-ref. 2.11.5)

Ainu noma ~ numa 'a morass'
 ko. nĭph 'swamp, marsh,
 quagmire'
 jpnse. numa 'id.'
 pKJ (Martin) *nomp̥xa

4.18.2 Ainu ni- 'tooth'

cf. *nirus* 'gums'
 < *nĭ* 'tooth' + *rus*
 'skin'
 ko. ni 'id.'

4.18.3 Ainu nai 'mountain stream'
(Hokkaido)

ko. nai 'river'

Class II: 4.18.4 Ainu na 'and, also, again'

ko. nainai 'again and again'
 mko. nooy 'again, further'
 nawi '(not) enough to;
 more'
 <*nap
 jpnse. nao < napo 'again,
 still more, fur-
 ther'
 pKJ (Martin) *nap

4.18.5 Ainu nup- 'high'

cf. *nupurĭ* 'mountain'
 Paekche nop^h 'high'
 jpnse. nop- 'id.'
 cf. *noppo*- 'tall person'
 ??*nobi*- 'to lengthen'
 ??*nobor*- 'to climb, go
 high'

4.18.6 Ainu ne 'becomes, is'

ko. na- 'become'
 jpnse. nar- 'id.'
 pKJ (Martin) *na-

- 4.18.7 (X-ref. 2.12.1)
 Ainu nu- 'eye'
 ko. nun 'eye'
 oj. nem- 'to glare at'
 jpnse. namida 'tears'
 ?? < na 'eye' + mi^{du} 'water'
- 4.18.8 Ainu ni 'tree'
 ko. namu 'id.'
- 4.18.9 (X-ref. 2.11.2)
 Ainu -ni, niu 'counter for
 persons'
 ko. na 'man, person'
- 4.18.10 (X-ref. 2.11.8)
 Ainu nuy 'flame'
 ko. nul- 'to burn'
- 4.18.11 (X-ref. 2.11.4)
 Ainu mo 'gentle, peaceful'
 ko. nōl- 'to take leisure,
 amuse oneself'
 jpnse. nora 'an idler, a
 profligate'
 noro-i 'slow, tardy'
 pKJ (Martin) *nór-
- Class III: 4.18.12 (X-ref. 2.11.3)
 Ainu no(ye) 'to twist'
 ko. no 'rope'
 jpnse. nawa 'id.'
 pKJ (Martin) *nap
- 4.18.13 Ainu nam 'fresh, cool'
 cf. *nam wakka* 'fresh
 water'
 ko. nal < nōl 'raw thing'
 jpnse. nama 'raw'
- 4.18.14 (X-ref. 2.11.6)
 Ainu ni 'to suck, to sip'
 ko. nēmgu- 'to swallow'

4.18.15 (X-ref. 2.12.2)

Ainu *nikax* 'to go bad, turn
sour'
ninge 'the gall
ko nigi 'to knead, massage'
jpnse. *niga-* 'bitter'

4.18.16 Ainu *nomi* 'the ceremony of
offering *inau* or
libations of wine
(often both) to
the gods; to wor-
ship'
oj. (Unger 1975) *nome* 'pray'

Discussion:

- 4.18.0 As there is no alternation in the relexes of any of the three languages, *n- is reconstructed.
- 4.18.1 Because Ainu *noma* ~ *numa* 'swamp' is found only in Batchelor (1938) and significantly not in Chiri's Geographical Dictionary, there is a strong possibility that the Ainu form has been borrowed from Japanese.
- 4.18.8 To make the phonetic match plausible, a development of: **namu* > *?*nabu?* > **nawu* > **nau* > *ni* must be hypothesized.
- 4.18.11 Examples of an [m] ~ [n] alternation in Ainu are:
1. *mike* ~ *nike* 'to slice; thin slices'
 2. *motarap* ~ *notarap* 'cheeks of fish'
 3. *mimak* ~ *nimak* 'tooth'
 4. *mike* ~ *nike* 'to shine, to sparkle'

As well, Ainu *meko* < Jpnse. *neko* 'cat'. It is hypothesized that the Ainu form *mo* 'gentle, peaceful' was originally **no*, because examples of such an alternation exist. This is supported by the Altaic items cited in 2.11.0.

- 4.18.15 The semantic match becomes more plausible upon considering the other Altaic forms (2.12.2).

4.19.0 *r- r:r:r

Class III: 4.19.1 Ainu rutke 'to take up the
cause of another'
(<rut + ke 'causitive
marker')

proto-Japanese (Unger 1975)
ruta 'sing, appeal'

4.19.2 Ainu ram 'mind, heart, soul,
feelings, to think'

oj. -ram- '"speaker's" pre-
sumptive (this form
is used when the
subject [almost al-
ways first person]
is the origin of
the presumption'
(Unger 1975:66)
'dubitative, ten-
tative mood marker'
(Miller 1967:327)

4.19.3 Ainu -ro 'first person plu-
ral hortative
marker'

ok. -ra 'imperative marker'
oj. -rö 'id.'

Discussion:

4.20.0 Unlike class 4.2, the reflex set here is
r:r:r. Thus proto */r/ must be recon-
structed.

4.20.0 *y- y:y:y

Class I: 4.20.1 (X-ref. 2.5.4)

Ainu i-(ne) 'four'
oj. yō 'id.'

4.20.2 Ainu ya 'land (as opposed to
sea); a high rock'

ko. yē 'a reef, a rock in
the sea'

- 4.20.3 Ainu ya 'a net'
ko. yĕk- 'to plait, to weave'
- 4.20.4 Ainu yar 'bark of trees some-
times used in
thatching'
ko. yĕl 'hemp'??
cf. yĕl-ssi 'hempseed'
- 4.20.5 Ainu yasitoma 'to be ashamed'
<yasi '?' + toma 'ap-
pearance'
ko. yĕppoda < *yĕsĕ poda 'to
pry into, to look secret-
ly, to spy out'
- 4.20.6 Ainu yu 'sulphur springs,
mineral water'
jpnse. yu 'boiled water'
- 4.20.7 Ainu yarui-cup 'summer;
month of August'
ko. yĕl- 'to form (of fruit)'
yĕlĭm < nyĕl 'summer'
jpnse. natu 'id.'
pKJ (Martin) *nYalom
- 4.20.8 (X-ref. 2.5.8)
Ainu ema-ka 'to discharge,
to cast away'
ema-ka-p 'garbage, re-
fuse'
jpnse. yabu 'refuse heap,
garbage dump'
- 4.20.9 Ainu ipe 'to eat (trans.)'
oj. yipi 'cooked grains,
food'

Discussion:

- 4.20.0 As there is no alternation the reflexes of any of the three languages, *y- is reconstructed
- 4.20.1 As /ye-/ and /yi-/ are nonallowable segment sequences in Ainu, the phonetic match of these items with the Japanese forms is not at all deviant.
- 4.20.7 This item is of interest for it provides a very plausible etymology for the Ainu form. Despite the fact that Ainu -*ɕup* is readily identifiable as the morpheme 'month', I have not found anywhere even a suggested etymology for the Ainu form. It can now be hypothesized to be 'time of ripening'. Martin's reconstruction seems unquestionable on the basis of the Middle Korean form, and thus it may be assumed that **nyar-* was an earlier Ainu form.

4.21.0 *a- a:a:a

Class I: 4.21.1 (X-ref. 2.14.1.2)

Ainu ak 'younger brother'
ko. akki 'id.'

- 4.21.2 Ainu ara 'to be pretty,
beautiful'
ko. ari- 'to be beautiful,
admirable, fine'

- 4.21.3 Ainu ar^a- 'sickness'
cf. *araka* 'to fall ill,
get sick'
< *ar* 'sickness' + *ka*
'verb derivation'
ko. al 'sickness'

- 4.21.4 Ainu atu 'to vomit'
ko. ath- 'to throw out; to
spit out'

Class II: 4.21.5 Ainu apto 'rain'

<ap + to 'water'
 ko. pi 'id.'
 jpnse. ame 'id.'
 pKJ (Martin) *(a-)mpye

4.21.6 (X-ref. 2.14.1.6)

Ainu ham 'not' (Karafuto)
 ko. an(i) 'id.'

4.21.7 (X-ref. 2.14.1.8)

Ainu amam 'rice (or other
 cereal grain)'
 ko. ām-žjuk 'gruel for nurs-
 ing children'
 <ām 'cereal grain' +
 žjuk 'gruel'

Class III: 4.21.8 (X-ref. 2.14.1.3)

Ainu apa 'doorway, entrance'
 ko. aph < alph 'front'
 jpnse. mape < ?*ma-ape 'id.'
 pKJ (Martin) *alpxye

4.21.9 Ainu assap 'oar, paddle'

jpnse. usu 'a mortar'
 usu-i 'thin'

4.21.10 Ainu amani 'beam of wood;
rafter; the long poles
to which the lower ends
of the side rafters of
a hut are tied'

<ama + ni 'wood'
 jpnse. abara 'rib'

4.21.11 (X-ref. 2.14.1.7)

Ainu apa 'relative'
 ko. aba- 'father'

4.21.12 Ainu ampa 'to carry'

oj. op- 'id.'

ko. əb- 'to carry on the back'

Discussion:

4.21.5 Martin (1965:246) lists this correspondence in his supplementary list of correspondences; that is, those items about which he has strong doubt. The Ainu form, *apto*, lends support to his reconstruction.

4.22.0 *e- ë:-:e

Class II: 4.22.1 Ainu ekai 'round, round about'

ko. eda < *ege- 'surrounding'

Class III: 4.22.2 Ainu etomočine 'stupid, silly, imbecile, absurd'

ko. ědup- 'to be dark, dim'
 ědün-i 'a fool, an idiot'

4.22.3 Ainu ererašuye 'to totter; shake (as in the wind); to be unable to stand (as a drunken man)'

<erera !?' + šuye
 'shake, tremble'

ko. ěl- 'to get drunk'

4.22.4 Ainu ene 'somewhere'

ko. ěnä- 'what, some'

4.23.0 *i- i:i:i

Class I: 4.23.1 Ainu -i 'nominalizer for ad- verbs and adjectives'

ko. -i 'id.'

jpnse. -i 'suffix forming de- verbal nouns'

Class III: 4.23.2 Ainu (i)ye 'to say, to speak'

ko. ip 'mouth'
 mko. ip(h)- 'to chant, to re-
 cite; to compose
 poems'
 oj. ip- 'to say'
 pKJ (Martin) *yalpx-

4.24.0 *o- o:o:o

Class I: 4.24.1 Ainu ok 'anger'

jpnse. okor- 'to get angry'

Class III: 4.24.2 Ainu o 'to bore; to open'

ko. obīi- 'to bore into; to
 scratch out'

4.24.3 Ainu oro 'from'

proto-jpnse. (Unger 1975)oro
 'descend, alight from'

4.25.0 *u- u:u:u

Class I: 4.25.1 Ainu u- marker of recipro-
city or mutuality'

oj. u- 'id.'
 cf. ukara 'common descent
 group'
 <u + kara 'family'

4.25.2 Ainu uk 'to take, to acquire,
to accept'

jpnse. uke- 'to receive'
 ??ko. ukkhim 'a handful'
 <uk-khim

4.25.3 Ainu uta 'to tap, to beat'

proto-jpnse. (Unger 1975)
 *utV 'to hit, beat'

4.25.4 (X-ref. 2.14.3.4)

Ainu umen 'to tire of some
 activity'
 oj. um- 'grow tired of, dis-
 gusted with'

Class III: 4.25.5 (X-ref. 2.14.3.6)

Ainu utakararip/otakarip
 'starfish'
 <uta '5' + kararip
 kogurye_v utu '5'
 jpnse. itu-(tu) 'id.'

4.26 Summary of Findings

| No. | Korean | Japanese | Ainu | Proto-KJA |
|-----|--------|----------|------|----------------------|
| 1. | p- | p- | p- | *p- |
| 2. | p- | p- | r- | *d- ?? |
| 3. | t- | t- | t- | *t- |
| 4. | č- | t- | t- | *č- |
| 5. | č- | t- | č- | *čY- ?? |
| 6. | č- | -- | y- | *j- |
| 7. | p- | p- | č- | *pč- ?? |
| 8. | č- | -- | p- | *pX- ?? |
| 9. | s- | s- | s- | *s- |
| 10. | č- | s- | s- | *tsY- ?? |
| 11. | s- | -- | h- | *S ₁ - ?? |
| 12. | h- | -- | s- | *S ₂ - ?? |
| 13. | k- | k- | k- | *k- |
| 14. | h- | k- | k- | *K ₁ - ?? |
| 15. | m- | m- | m- | *m- |
| 16. | m- | m- | w, φ | *b- ?? |
| 17. | w, φ | w- | w- | *w- |
| 18. | n- | n- | n- | *n- |
| 19. | r- | r- | r- | *r- |
| 20. | y- | y- | y- | *y- |
| 21. | a- | a- | a- | *a- |
| 22. | ě- | -- | e- | *e- |
| 23. | i- | i- | i- | *i- |
| 24. | o- | o- | o- | *o- |
| 25. | u- | u- | u- | *u- |

4.27 Breakdown of Correspondences:

| No. | Class | | | | Correspondences | | |
|-----|-------|----|-----|-------|-----------------|----|----|
| | I | II | III | TOTAL | KJA | AK | AJ |
| 1. | 14 | 5 | 4 | 23 | 10 | 6 | 7 |
| 2. | 6 | 10 | 7 | 23 | 11 | 5 | 7 |
| 3. | 3 | 6 | 3 | 12 | 7 | 4 | 1 |
| 4. | - | 6 | 4 | 10 | 4 | 6 | - |
| 5. | 1 | 2 | 1 | 4 | 1 | 3 | - |
| 6. | - | 1 | 4 | 5 | 1 | 4 | - |
| 7. | 1 | 1 | 2 | 4 | 2 | 2 | - |
| 8. | 1 | 1 | - | 2 | - | 2 | - |
| 9. | - | 16 | 2 | 18 | 6 | 9 | 3 |
| 10. | 2 | 3 | 2 | 7 | 2 | 5 | - |
| 11. | 1 | - | 3 | 4 | - | 4 | - |
| 12. | 1 | - | 1 | 2 | - | 2 | - |
| 13. | 9 | 3 | 16 | 28 | 14 | 6 | 8 |
| 14. | - | 3 | - | 3 | 1 | 2 | - |
| 15. | - | 6 | 11 | 17 | 8 | 4 | 5 |
| 16. | 1 | 3 | 2 | 6 | 1 | 5 | - |
| 17. | - | - | 4 | 4 | - | 2 | 2 |
| 18. | 3 | 8 | 5 | 16 | 9 | 6 | 1 |
| 19. | - | - | 3 | 3 | 1 | - | 2 |
| 20. | 1 | - | 8 | 9 | 1 | 4 | 4 |
| 21. | 4 | 3 | 5 | 12 | 3 | 8 | 1 |
| 22. | - | 1 | 3 | 4 | - | 4 | - |
| 23. | 1 | - | 1 | 2 | 2 | - | - |
| 24. | 1 | 2 | - | 3 | - | 1 | 2 |
| 25. | 4 | - | 1 | 5 | 1 | 1 | 3 |
| | 54 | 80 | 92 | 226 | 85 | 95 | 46 |

4.28 Conclusions

No firm claim is being made about the membership of the correspondence sets into the three possible categories (that is, Classes I, II, III). Suffice it to say that the majority of the correspondences are not in Class I. The overall total of 226 correspondences is, however, vast enough to support the hypothesis that the Ainu language is integrally a part of the Northeast Asian linguistic community. It is no recent interloper in that area. Correspondences of this complexity can only be explained by one of two possibilities: borrowing or common heritage.

Of the correspondences themselves, in 38 percent of the cases, reflexes could be found in all three languages: Korean, Japanese, and Ainu. And whereas reflexes between only Ainu and Japanese were found in 20 percent of the total number of correspondences, reflexes between only Korean and Ainu were found in 42 percent of the cases. This is a totally unexpected result. It has long been documented that the Ainu and the Japanese have had direct contact, but it has never been hypothesized that the Ainu and the Koreans have had any interrelationship. The evidence presented in this chapter conclusively shows otherwise. A discussion of the possible nature of this relationship is reserved for the concluding chapter.

CHAPTER 5

Conclusions and Implications

5.1 Introduction

This work has shown various phonological, morphological, and structural similarities between Ainu and the Altaic languages. This chapter addresses the question whether these similarities can be attributed to borrowing or whether a genetic relationship can be concluded.

Borrowing can be readily identifiable if a sound change is exhibited that is aberrant from the regular development. Thus Poppe (1975:177) illustrates that Mongolian *boyos* < *boyas* 'pregnant (said of an animal)' is a borrowing from Turkic *boyaz* as the regular correspondence to Turkic /z/ is Mongolian /r/. None of the cognate sets proposed in this work can be eliminated in this fashion. Ainu *puta* 'lid, cover' was cited (page) as a loan from Japanese *futa* 'id.'. That this is a loan can be seen from the fact that the regular development of /p-/ is /φ/ before the high back vowel in Ainu.

Another argument against the borrowing hypothesis is the specific lexical items themselves. It has been commonly recognized that, whereas cultural items are readily susceptible to borrowing, certain vocabulary items exhibit a marked resistance to borrowing. Based on this concept, Morris Swadesh proposed a 200-item word list (later shortened to 100 items) that supposedly consisted of those vocabulary items which were most resistant to borrowing. Other than item 2.14.2.1, Ainu *itako* 'shaman', the lexical items presented herein are not those that can be associated with religion or some similar aspect of culture that is susceptible to borrowing. Some of the items, in fact, do appear on the word lists. Once again, borrowing is not supported.

Borrowing is also apparent when there is incomplete accommodation of a lexical item to the synchronic phonology of the borrowing language. In this way, items beginning with voiced obstruents in Japanese are recognized as loanwords since the native Japanese lexicon has a very restricted occurrence of voiced initial obstruents. None of the items cited

in chapter 2 or chapter 4 would fall into this category. Thus, if any of the times are loans, they are completely assimilated.

Let us assume, however, that the phonological correspondences and typological similarities cited in this work can be attributed to borrowing. It would then follow that the borrowing occurred from Alatic peoples who presently are, or were at one time, contiguous to the Ainu.

For a language to borrow from another language, there must not only have been contact, but also contact conducive to borrowing. Such a situation would be one where the speakers of the borrowing language actively promote the borrowing, or a reverse situation where the speakers of one language suppress another linguistic group. I will attempt to show that neither was the case with the Ainu.

A prime example in the former category is the Japanese language which has borrowed extensively from Chinese during successive historical periods, and more recently from Western languages, primarily English. Buddhism was the major impetus for the borrowing from Chinese. The Japanese actively sought knowledge of Buddhist teachings as well as of the Chinese script via which the doctrine was transmitted. Borrowings from European languages entered Japanese at a later date and came as a result of an intense desire on the part of the Japanese to understand (and, in some cases, adapt) the concepts related to Christianity, technology, and popular culture.

The situation with the Ainu has been fundamentally different from that of the Japanese. The Japanese borrowed both a writing system and a religion from the Chinese; the Ainu language has never had a writing system and the Ainu people were not literate in any language until after the Meiji Restoration in Japan, when compulsory education (in Japanese) was established. The Japanese people, furthermore, have shown themselves remarkably amenable to borrowing in all areas, linguistic and nonlinguistic. This has not been the case in the documented history of the Ainu.

Furthermore, in this documented history of the Ainu,¹ the most prolonged contact was with the Japanese. This was by no means a close relationship, however, nor one conducive to borrowing. The two groups remained warring factions until the final

(and gradual) submission of the Ainu in the nineteenth century. Nonetheless, the most facile explanation would maintain that, other than recent borrowings as a result of trade contact with Manchu and Mongolian peoples, all Altaic features in Ainu came via Japanese.

One of the main problems with this approach is that it accepts as proven the Altaic origin of the Japanese language. Miller (1971) has made the best effort to date to relate Japanese to the Altaic mainstream, but unaccounted for are many areas of comparative phonology and morphology. With the publication of Martin's (1966) landmark article demonstrating the relationship between Japanese and Korean, by virtue of this affiliation, Japanese has been incorporated under the Altaic umbrella. Therefore, since the status of Japanese itself as an Altaic language is open to question, it follows that it is only on tenuous grounds that it can be maintained that the Altaic features in Ainu entered via Japanese.

Furthermore, verification of the preceding hypothesis appears relatively simple as the vast majority of the Ainu lexical items presented in chapter 2 should have Japanese reflexes. If the form was never present in Japanese, it is impossible to maintain that the source of borrowing was Japanese. A mere thirty items are in this category. This is sufficient basis for concluding that the Altaic features present in Ainu are not attributable to borrowing from Japanese. It may be the case, however, that these items were indeed present in an earlier form of Japanese, but then disappeared from the language. The great statistical majority of these items "surviving" in Ainu, but not so in Japanese, would argue against this.

The situation is far different in the case of Tungus and Mongolian. The majority of the items presented in chapter 2 do contain reflexes in either the Tungusic or Mongolian languages; in many cases, members of both language families are represented. It is thus possible to attribute the Altaic features in Ainu to a borrowing relationship from a Tungusic/Mongolian source.

It is interesting to note, however, that the documented history of the Ainu does not lend this conclusion any support. As outlined in chapter 1, there was indeed contact between the Mongolians and the Ainu, and subsequently the Manchu, over a period dating from the thirteenth century until the latter

part of the eighteenth century. Despite these centuries of contact, there is little evidence of any close relationship between the two peoples: the mainland groups came regularly to Karafuto for trade and tribute, and departed soon after their mission was accomplished. They did not stay; they did not intermarry. Stephan (1971:29) succinctly describes the situation by stating:

China's seven-century association with Sakhalin left no lasting influence. Successive expeditions and tribute missions had only a local significance except for a trickle of Chinese goods into Japan, a cartographic expedition, and scattered monuments attesting to a long-dead sovereignty.

On the basis of this information, it is difficult to find support for the conclusion attributing the Altaic features in Ainu to borrowing from Mongolian/Tungusic peoples.

Further, it should be noted that these trade contacts were between the Mongolian/Tungus and only the Karafuto Ainu. The Hokkaido Ainu not only did not have direct contact with the mainland tribes, but they also had little contact with the Karafuto Ainu. If it were a case of borrowing as a result of this trade, then the data should clearly show a greater proportion of loanwords in the Karafuto dialect. It would be expected further that only a small proportion of these would have been further transmitted to the Hokkaido dialect group. The data clearly does not support this, for the majority of the items presented occur in the vocabulary are common to both the Hokkaido and the Karafuto groups.

Note that this evidence does not necessarily argue against a borrowing relationship, but against borrowing having occurred after the thirteenth century. It is possible that a borrowing relationship existed sometime in the earlier, undocumented history of the Ainu. Further, as the Altaic evidence is present in both the Karafuto and the Hokkaido dialects, it must be assumed that, if borrowing took place, then it occurred at a stage of the language prior to this dialectal division, that is, proto-Ainu.

To recapitulate, the following points have been established:

1. the Ainu language contains many features in common with Altaic. These features are primarily shared lexical items exhibiting recurring phonological correspondences,
2. most of these features must have been present at the proto-Ainu stage,
3. for borrowing to occur, contact between the proto-Ainu and an Altaic people must be assumed.

The establishment of the first two points in this work as well as the acceptance of the third leads immediately to an hypothesis of the origin of the Ainu: specifically, that the Ainu are of mainland origin.

It must be assumed that the Ainu were on the mainland and that the contact took place at that time. If this were not assumed, then there is no source of borrowing. Further, the diffusion of the Altaic features throughout the Ainu dialects cannot be explained. Thus the evidence conclusively supports the mainland origin of the Ainu. It is obvious, furthermore, that this conclusion stands whether the Altaic features in Ainu are attributed to borrowing or to a genetic relationship. The Austronesian-origin hypothesis is thus to be regarded as extremely implausible.

It is now established that the proto-Ainu were on the Asiatic continent, and, further, that the Altaic features were present in their language at that stage. For the sake of argument, let us assume that the Ainu are of some unspecified, but non-Altaic, origin and examine the implications of this position.

To assume this would be to maintain that, while on the Asiatic mainland, the Ainu had contact with an Altaic people or peoples and then migrated, presumably via the Amur River, to Karafuto and then subsequently further down the Japanese archipelago, first to Hokkaido and then later down to Honshu. It would follow that increasing contact between the Ainu and the Japanese would result in a small number of mutual borrowings which, because of fairly recent

origin, would be traceable to either an Ainu or a Japanese source.

The 226 cognate sets presented in chapter 4 are, however, by no means a small number. The divergent nature of some of the reflexes (4.2 [p]:[r], for example) indicates that this contact was not recent. The morphological and lexical evidence presented in chapter 3 further supports this conclusion. Also arguing against recent borrowing is the fact that it is impossible to trace the shared lexical items to either an Ainu or a Japanese source.

It thus must be concluded that the Ainu language had early contacts with both Korean and Japanese. To account for the fact that both the Karafuto and the Hokkaido dialects of Ainu share the lexical items that exhibit the recurring phonological correspondences with Japanese and Korean, it must once again be concluded that the contact took place at the proto-Ainu stage, and thus that it occurred on the Asiatic continent. It also follows that the contact was between proto-Ainu and proto-Korean-Japanese.

At this point, we are reduced to pure speculation. Other than the fact that Middle Korean is a direct descendant of the Silla language,² the relationship between Silla and the various other languages occupying the Korean peninsula (Puyo, Kogurye, Mahan) has not been determined. Because these languages were all located in the relatively small confines of the Korean peninsula, it must be assumed that they had mutual influences on each other, even if they were not necessarily genetically related. Is it not possible that the Ainu were one of these groups in the Korean peninsula? A migration upward to the Sungari River and then to the Amur and over to Karafuto is surely feasible.

In conclusion, it should now be apparent that, while a genetic relationship does not necessarily have to be concluded, it can be concluded. Ainu thus neatly fits Krueger's summation of Altaic studies.³ There is a 'respectable amount' of phonological correspondences; a total of 140 possible cognates exhibiting recurring sound correspondences between Ainu and Altaic have been proposed in my work. Some amount of identical morpheme behavior as well as identity of morphemes has also been proposed (chapter 3). For typological similarities, evidence has been cited (see the Appendix) for the existence of a limited vowel harmony system as well

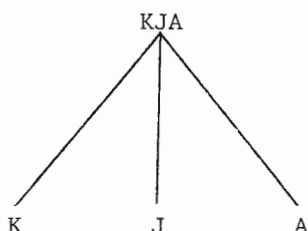
as data to show the basic agglutinative structure of Ainu. In these two respects, Ainu agrees with the Altaic languages. The body of the dissertation, however, rests on the sound correspondences, and I have tried to demonstrate that the semantic and phonetic fittings of the lexical sets presented are precise enough to lead to the conclusion that the Ainu items are cognate with the Altaic forms.

For the reasons cited in this chapter and for the reasons discussed in the various sections of chapters 2, 3, and 4, the borrowing hypothesis does not receive support. The Altaic features in Ainu thus are seen as being a result of the fact that Ainu is genetically related to Altaic. The commonalities among Korean, Japanese, and Ainu are seen as being a result of the fact that these three languages are genetically related.

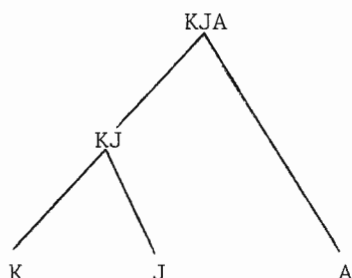
5.2 Areas for Further Study

One of the conclusions of this study is that Korean, Japanese, and Ainu are genetically related. The nature of this relationship, however, has not been dealt with. There are four logically possible family tree diagrams which could correctly schematize the relationship:

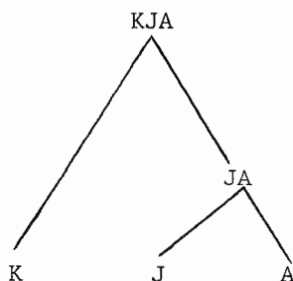
1)



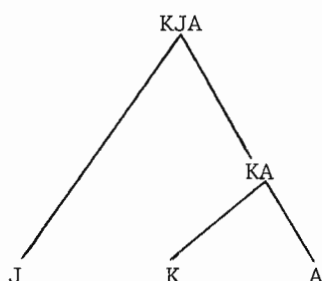
2)



3)



4)



The nature of the evidence presented in this monograph would suggest that the fourth possibility correctly describes the relationship; that is, the initial split was between Korean-Ainu and Japanese. That Korean and Ainu are more closely related is supported by the fact that these two languages share a greater number of cognates (chapter 4) than Ainu does with Japanese. Further, Ainu and Korean have some recurring sound correspondences that are not shared with Japanese. In addition, there is also a close identity in the numeral systems of Ainu and Korean (section 4.6).

Such a conclusion, however, is premature. The relationship between Korean and Japanese has been quite strongly documented. Commonalities in areas of syntax, vocabulary, and accentual systems between the two languages support the claim that Korean and Japanese are relatively closely related. Martin particularly notes the close resemblances in the pitch accent systems of the two languages and concludes (1975:48):

that is the most compelling argument for feeling that the two eastern languages must be more

closely related to each other than either is to any other language.

Thus Martin would find only the second possible tree diagram (p.194) acceptable.

In Martin's discussion (1975:47) of the problems in vowel harmony commonalities between Korean and Japanese, however, he concludes with the statement:

And I suspect that no one has closely examined the resemblances of Korean to the Paleosiberian languages.

Martin is indeed correct in this statement, and he is further correct in his assumption that this will be a revealing area of investigation. This is precisely the area that I have begun to investigate in my work.

Further research will thus be centered on the nature of the relationship of Korean, Japanese, and Ainu. By arriving at an answer to this question, one of the results should be a body of proto-forms for much of the basic vocabulary of Proto-Korean-Japanese-Ainu. These reconstructions will then constitute a body of data for comparison with the Altaic reconstructions and thus a possible resolution to the question of the nature of the relationship of KJA to Altaic.

NOTES

1. Refer to chapter 1.
2. Lee (1973:38).
3. Refer to quote, herein Section 1.2.5., paragraph two.

APPENDIX

A Grammatical Sketch of Ainu

6.0 Introduction

This sketch deals primarily with Ainu phonology, morphology, and word classes. Although a large amount concerning Ainu has been written in the Japanese language, the little that has appeared in English is totally inadequate and must not be relied on. Simeon (1968), for example, appears to be completely unaware of any of the Japanese literature. It is for this reason that this sketch has been included as an appendix to my book. I have translated, collated, and summarized the data from the various works of Chiri, Tamura, Kindaichi, and Hattori. The various analyses presented in this chapter are basically those of these scholars.

Because of the paucity of data (particularly from the Kurile dialect) as well as the limited scope of this chapter, unless otherwise stated, the information contained herein refers to the Hokkaido dialect. The reader is cautioned, however, that this is by no means a completely homogeneous grouping in itself. The Hokkaido dialect is subclassified by Tamura (1972) into the following major subdivisions: i) Northern, ii) Southern, iii) Eastern, and iv) Western. The Karafuto dialect is assumed to be similarly subdivided, but due to insufficient data, a subgrouping schema has not yet been posited. Whenever dialectal differences arise within the material presented in this chapter, the necessary information will be provided.

6.1 Folklore and Speech Styles

As well as being aware of dialectal differences, the researcher must also be conscious of various stylistic differences. As there is no written language, therefore, most research must center on the Ainu folklore which differs in many aspects from the ordinary conversational style. Two of the most apparent differences are that the folklore genre is more polite and utilizes auxiliary verbs, whereas conversational style tends to use word suffixes. As the folklore genre occupies an important place in Ainu culture as well as being a major source of our

linguistic data, a short description of the major categories follows.¹ The following are the main classifications and their identifying traits²:

1. *isotak* (< *iso* 'hunting/fishing', *itak* 'story')
-a story of one's own personal experience related to a hunting or fishing episode.
2. *upaškuma* (*učyaškuma* Karafuto)
-an old tale with a moral.
3. *yukara*
-the story of some hero or incident,
-the most well-known type of Ainu folktale;
-this name is commonly used in Japanese literature to refer to Ainu folktales in general.
4. *kamuiyukara*
-a type of *yukara* dealing with the various gods of the Ainu pantheon,
-this type of tale is always sung.
5. *oina*
-one type of *kamuiyukara*
-more deeply religious than the *kamuiyukara* and deals with the founding of the Ainu nation.
6. *uepekere*
-original meaning of 'to inform' or 'news'
-always spoken in the first person although it does not relate to a personal matter.

In relation to the topic of speech, style, Hattori (1957) has reported on a special language among the older generation of the Ainu. People more than thirty years old replaced many basic content words with new items. This new lexicon was said to constitute a special 'language' which was used among those thirty or older and which could not be understood by the younger generation.

6.2.0 Ainu Phonology

6.2.1 Phonemes

C: /p, t, k, č, s, m, n, r, w, y, h/
V: /i, e, a, o, u/

6.2.2 Allophonic Variants

1. Voiced counterparts of the obstruents appear allophonically in intervocalic position and after nasal segments in all dialects of Ainu.³
2. In Hokkaido dialects, [s] alternates freely with [ʃ].
3. Syllable-final /r/ has a vowel of off-glide echoing the immediately preceding vowel. Thus [r^a], [r^e], and [r^o] are allophonic variants of /r/. Whereas phonetically all occurrences of syllable-final [r] are followed by a vowel off-glide, this not true phonemically. Thus the Ainu words [kukoro] 'I have', [poro] 'big' and [oar^a] 'completely' are phonetically /kukor/, /poro/, and /oar/, respectively. Two phonemic minimal pairs exemplifying this distinction are *retara* 'white' vs. *re tara* '3 sacks', transcribed phonemically as /re-tar/ vs. /retara/, respectively.⁴ The second minimal pair is [uker^e] 'to be sore, to fester' vs. [ukere] 'rub together'.⁵ These are phonemically /uker/ and /ukere/, respectively. Perhaps the strongest support in favor of this distinction is that the Ainu speakers are unconscious of these epenthetic vowels.

6.2.3 Syllable Structure

(C₁)V(C₂)C₁: /p, t, k, č, s, m, n, r, w, y, h/

V: /i, e, a, o, u/

C₂: /p, t, k, s, m, n, r, w, y/ in Hokkaido dialects
/s, m, n, w, y, h/ in Karafuto

6.2.4 Permissible Open Syllables

A total of fifty-six possible open syllables are as follows:

| | a | i | u | e | o |
|---|----|----|----|----|----|
| - | a | i | u | e | o |
| k | ka | ki | ku | ke | ko |
| s | sa | si | su | se | so |
| t | ta | -- | tu | te | to |
| č | ča | či | ču | če | čo |
| n | na | ní | nu | ne | no |
| h | ha | hi | hu | he | ho |
| p | pa | pí | pu | pe | po |
| m | ma | mi | mu | me | mo |
| y | ya | -- | yu | ye | yo |
| r | ra | ri | ru | re | ro |
| w | wa | -- | -- | we | wo |

Note that as in the Japanese language, [ti], [yi], [wi], and [wu] are not permissible sequences. However, the sequences [tu], [ye], [we], and [wo] do occur.

6.2.5 Morphophonemics

Whether or not the final syllable of a base form is open or closed is often the conditioning factor in the choice of allomorphs which are affixed to this base. Examples are:

- i) Nominals are derived from verbs by the addition of /-p/ after an open syllable, but /-pe/ after a closed syllable⁶:

arpa-p (go-thing) 'a thing that goes'
 soyne-p (go outside-thing) 'a thing that goes outside'
 či-ke-p (we-drink-thing) 'a thing that we drink', that is, 'liquor'
 pase-p (heavy-thing) 'a heavy thing'
 ek-pe (come-thing) 'a thing that comes'
 ahun-pe (enter-thing) 'a thing that enters'
 pon-pe (small-thing) 'a small thing'
 wen-pe (bad-thing) 'a bad thing'
 retar-pe (white-thing) 'a white thing'⁷

- ii) A bound morpheme with the meaning of 'person' has two allomorphs: /-n/ if suffixed to open syllables, but /-iw/ if suffixed to closed:

sine-n 'one person'
 tu-n 'two people'
 re-n 'three people'
 ine-n 'four people'
 ašikne-n 'five people'

iwan-iw 'six people'
 arwan-iw 'seven people'
 tupesan-iw 'eight people'
 sinepesan-iw 'nine people'
 wan-iw 'ten people'

- iii) There are two causative affixes: /-re/
 which is added to open syllables, and /-te/
 which is added to closed:

| | |
|-----------|-------------------------|
| arpa | 'to go' |
| arpa-re | 'to send' |
| hekatu | 'to be born' |
| hekatu-re | 'to cause to be born' |
| oma | 'to be inside' |
| oma-re | 'to cause to be inside' |
| e | 'to eat' |
| e-re | 'to feed' |
| aš | 'to stand' |
| aš-te | 'to set up' |
| čiš | 'to cry' |
| čiš-te | 'to cause to cry' |
| oman | 'to go away' |
| oman-de | 'to send away' |
| rikin | 'to ascend' |
| rikin-de | 'to cause to ascend' |

6.2.6 Accent and Tone

Unlike English accent which is characterized as strong-weak opposition (that is, stress accent), Ainu accent is characterized as a high-low opposition. That is, similar to the Japanese language, Ainu has a pitch accent system. Most Hokkaido dialects maintain a phonemic accent distinction as the following minimal pairs show:

- | | | |
|----|-------|----------------------|
| 1. | torí | 'bird' |
| | tóri | 'stay over; sojourn' |
| 2. | umá | 'together' |
| | úma | 'horse' (<Jpnse.) |
| 3. | kerá | 'straw raincoat' |
| | kéra | 'flavor' |
| 4. | iká | 'never' |
| | íka | 'overflow' |
| 5. | monák | 'especially' |
| | mónak | 'to be awake' |
| 6. | niná | 'to knead' |
| | nína | 'to gather firewood' |

- | | | |
|----|-------|---------------------|
| 7. | nisáp | 'thin' |
| | nísap | 'sudden' |
| 8. | utúr | 'between; interval' |
| | útur | 'hearth' |

In addition, two minimal pairs can be found in the Karafuto dialect of Ainu:

- | | | |
|----|--------|------------------|
| 1. | umá | 'together' |
| | úma | 'horse' |
| 2. | etúhka | 'to thrust out' |
| | étuhka | 'a type of crow' |

In general, accented vowels in Hokkaido correspond to long vowels in Karafuto:

| | <u>Karafuto</u> | <u>Hokkaido</u> | <u>Gloss</u> |
|----|-----------------|-----------------|-------------------|
| 1. | paase kotan | páse kotan | 'capital city' |
| 2. | paa | pá | 'age' |
| 3. | siisam | sísam | 'Japanese person' |
| 4. | siimon | símon | 'right side' |
| 5. | weeci | uwéci | 'chilblains' |
| 6. | reera | réra | 'wind' |
| 7. | etooro | etóro | 'snore' |
| 8. | nuuman | núman | 'yesterday' |
| 9. | tuunas | túnas | 'night' |

In addition to phonemic stress, some researchers have also remarked on a quality of 'musical tone' which appears in some dialects. Unfortunately, these researchers have offered no formal definition of this feature. Batchelor (1938:19), in a discussion of the dialectal differences of Ainu, remarks that:

The chief difficulty in a Yezo (Hokkaido [jtp]) Ainu understanding a man from Saghalien . . . arises from the marked tones the people impose upon their words . . . (they) emphatically intone or accent every syllable.

and further (p.19).

There are many villages in Yezo, more formerly than than now, quite a number of people who speak their words with a slight *tonic* (Batchelor's emphasis [jtp]) accent as though the language was originally connected with Chinese or some kindred tongue.

In the first quote, Batchelor implies that it is the Karafuto dialect that has the tone; in the second quote, it is stated that the Yezo (Hokkaido) dialect is the one that exhibits this feature. Despite this apparent contradiction, it is indeed the Karafuto dialect that has this musical quality. This feature does, however, exist in some parts of Hokkaido, primarily those closest to the island of Karafuto; and it is to these dialects that Batchelor was referring in his second quote. Other investigators, notably Piłsudski (1912:10-11) have also remarked on the "musical quality" of the Karafuto dialect.

6.2.7 Vowel Harmony

Chiri (1952) claimed to have discovered the process of vowel harmony in operation in a limited part of the lexicon of Ainu. Lexical derivation is often the source of transitive verbs; possessed forms of nouns are formed by inflection. In both cases, the result is achieved by appending a single vowel to the word stem. The quality of the suffixed vowel appears to be dependent on the quality of the vowel in the stem. Chiri concludes that, in these two cases, Ainu vowels can be classified into three groups: (1) /a,u/, (2) /o/, and (3) /i,e/. Vowel harmony restrictions maintain that classes (1) and (3), or classes (2) and (3) may coexist, but that classes (1) and (2) may not appear together.

Chiri's analysis, however, is based on statistical evidence only; that is, examples of the combinations (1) and (3) and those combining (2) and (3) are merely in greater abundance than those where (1) and (2) coexist. Chiri concludes that this statistical majority indicates a period in the history of the language when the latter combination was not allowed, and that Ainu phonology and word formation were governed by vowel harmony restrictions similar to those present in the Uralic and Altaic languages. Other than this analysis by Chiri, however, no other evidence has been posited for the existence of vowel harmony in the Ainu language.

6.3.0 Lexical Composition

Root morphemes in Ainu may be independent or may appear with prefixes or suffixes, or both. Because of the possibility of prefixation, some researchers (for example, Austerlitz, 1970:2-3) have maintained that Ainu is not an agglutinative language. Consider, however, the following example (Batchelor 1938:9) which is typical of Ainu lexical formation:

| | |
|-----------------------|---|
| <i>eyaiepirikarep</i> | 'that which one causes himself to gain for himself' |
| <i>pirika</i> | 'good' |
| <i>pirikap</i> | 'a good thing' |
| <i>pirikare</i> | 'to better' |
| <i>epirika</i> | 'to gain' |
| <i>epirikap</i> | 'something gained' |
| <i>epirikare</i> | 'to make another gain' |
| <i>yaiepirika</i> | 'to gain by one's self' |
| <i>yaiepirikare</i> | 'to make one's self gain' |
| <i>eyaiepirikare</i> | 'to make one gain some- thing for himself' |
| <i>eyaiepirikare</i> | 'that which one causes himself to gain for himself' |

Thus words in the Ainu language consist of a single root plus additional affixes which may either be prefixes or suffixes. As can be seen in the preceding example, the resulting word may be of considerable length. The morphemes are invariable in form, and the boundaries between them are clear. Furthermore, each morpheme has a single function. For these reasons it will be maintained that Ainu is an agglutinative language.

6.4.0 Nouns

6.4.1 Gender

Nouns in Ainu are not inflected for gender.

6.4.2 Number

Nouns in Ainu are normally not inflected for number. A singular/plural distinction can be obtained, however, by the addition of the suffixes /-utar/ or /-čín/ ~ /-šin/. The latter appears only in the Karafuto dialects. Consider the following examples:

| | |
|-------------------|----------|
| <i>ainu</i> | 'man' |
| <i>ainu-utar</i> | 'men' |
| <i>kamui</i> | 'god' |
| <i>kamui-utar</i> | 'gods' |
| <i>čise</i> | 'house' |
| <i>čise-utar</i> | 'houses' |

| | |
|-------------|-----------------|
| matnepo | 'girl' |
| matnepo-čin | 'girls' |
| saha | 'elder sister' |
| saha-šin | 'elder sisters' |

There are some cases where plurals are formed by reduplication:

| | |
|----------|-----------------------------|
| čaičai | 'twigs' |
| kaukau | 'hailstones' |
| kaikai | 'breakers (waves)' |
| kankan | 'intestines' |
| merimeri | 'sparkles/flashes of light' |
| paspas | 'cinders' |
| pisepise | 'a kind of seaweed' |
| ramram | 'fish scales' |
| taktak | 'testicles' |
| tuntun | 'fish embryo' |
| toitoi | 'clods of earth' |

6.4.3.0 Case

Case relationships in Ainu are expressed by various postpositions and by word order when there is no overt case marker.

6.4.3.1 Unmarked Forms

When a noun serves as a subject or direct object in an Ainu sentence, it takes no marker. The relationships are expressed by Subject-Object-Verb word order. Consider the following sentences:

| | |
|------------------|-----------------------------|
| ainu ek | 'a person came' |
| šisam arpa | 'a Japanese went' |
| huči mina | 'grandmother laughed' |
| ekaši iruška | 'grandfather got angry' |
| wakka ku | '(I) drank water' |
| seta kira | 'a dog escaped' |
| seta ainu nospa | 'the dog chased the man' |
| ainu seta nospa | 'the man chased the dog' |
| kamui umma raike | 'the bear killed the horse' |

When a noun serves as an indirect object in an Ainu sentence, it also takes no marker. It is distinguished from a direct object by the context of the sentence. Consider the following examples:

| | |
|------------------------|--|
| tamepe huči ku-kore na | (this/old woman/1st per- son singular- gave/sentence final particle) |
| | '(I) gave this to the old wo- man' |
| huči matkači paskuma | (old woman/ young girl/told a folkstory) |
| | 'the old wo- man told a tale to the young girl' |

6.4.3.2 /ta/

The particle /ta/ (variant /te/) shows location in time or space, as well as destination with verbs of motion. Examples:

| | |
|---|---|
| oro ta | 'in that place' |
| kotpoki ta | 'in the front of' |
| kotčake ta | 'in the front place' |
| sa ta ek | '(he) came to the hearth' |
| piš ta san | '(he) went down to the beach' |
| kotan ta hosipi | '(he) returned to the village' |
| ahun kamui mau čise-upšot to uwešinoe (enter/great/wind/house-inside/locative/ race around) | |
| | 'the entering great wind raced around the house' |

The particle /un/ can be substituted for /ta/ with no apparent change in meaning:

| | |
|-----------------------|-----------------------------------|
| Poropet kotan un arpa | '(he) went to Poropet village' |
| hunak un arpa | 'where did (he) go?' |
| te un ek | 'come here!' |

6.4.3.3 /or(o)/, /(or)wa(no)/

These particles express the point in time or space from which an action originates. They appear to be interchangeable. Consider the following examples:

| | |
|--------------------------------|--|
| ainu uturu wa soikosanu | '(it) flew out from amongst the people' |
| naata oro e-nu | 'from whom did you hear it?' (Kara- futo) |
| šisam oro an-nu | '(I) heard it from a Japanese' (Kara- futo) |
| Poropet orwano širawoi orpakno | 'from Poropet to Shirawoi' |
| kotan-pa wa kotan-keš pakno | 'from the top of the village to the bot- tom of the village' |

6.4.3.4 /tura(no)/

The particle /tura(no)/ denotes the sense of 'with' or 'accompanied by' (comitative case). Consider the following examples:

yupo tura ku-oman

'(I'll) go with my
brother'

akot tureš turano oka-an ike

'he lived together
with his younger
sister, but . . . '

The morpheme /new(a)/ expresses the meaning
'and';

okkay new menoko 'men and women'

miči new hapo 'father and mother'

6.4.3.5 /pak(no)/

The particle /pak(no)/ expresses the meaning of
'to the point of'. Consider the following examples:

kotan-pa wa kotan-keš pakno

'from the top of the
village to the bot-
tom of the village'

ta pakno

'up to that point'

6.4.3.6 /ari/ ~ /ani/

The particles /ari/ and /ani/ denote the in-
strument or means through which or by which an ac-
tion is performed. Consider the following examples:

emuš ani tuye 'cut with a knife'

op ani čep raige '(he) killed a fish
with a spear'

tek ari kar-pe 'an item made by hand'

6.4.3.7 /-(h)V/

There is no postposition comparable to the above
markers to express the possessor in Ainu. The
possessed nouns, however, must be inflected with a
suffixed possessive marker and may further be pre-
fixed with the appropriate person marker. If the
noun root is consonant final, the possessive marker

is /-V/; if vowel-final, than /-(h)V/. This unspecified vowel mirrors the last vowel of the root (section 6.2.7). Consider the following examples:

| | |
|------------------|--|
| nea ainu mači-hi | (that/person/wife- possessed) 'that person's wife' |
| huči šiki-hi | (grandmother/eye- possessed) 'grandmother's eyes' |
| ekaši sapa-ha | (grandfather/head- possessed) 'grandfather's head' |
| hekači teke-he | (child/hand-possessed) 'the child's hand' |

The following charts display the prefixed person-marker paradigms:

| Person | Singular | Plural |
|--------|----------------|----------------|
| First | ku- | a- (incl.) |
| | | či- (excl.) |
| Second | e- | eči- |
| | a- (honorific) | a- (honorific) |
| Third | ∅ | ∅ |

Example: sik 'eye'

| | |
|-----------|--------------------------|
| sik-i | 3rd person sing. |
| sik-i | 3rd person plural |
| e-sik-i | 2nd person sing. |
| eči-sik-i | 2nd person plural |
| a-sik-i | 2nd person sing. plural |
| a-sik-i | 2nd person plural polite |
| ku-sik-i | 1st person sing. |
| a-sik-i | 1st person plural incl. |
| či-sik-i | 1st person sing. excl. |

Hero epics (*yukara*) display a somewhat simplified system of inflection:⁸

| Person | Singular | Plural |
|--------|----------|--------|
| First | a- | a- |
| Second | e- | eči- |
| Third | ϕ | ϕ |

The religious chants (*oina* and *kamuiyukara*) display a yet different paradigm:

| Person | Singular | Plural |
|--------|----------|--------|
| First | či- | či- |
| Second | e- | eči- |
| Third | ϕ | ϕ |

6.4.3.8 /kasuno/, /akkari/

A comparative relation is expressed in Ainu by the morphemes /kasuno/ and /akkari/. They appear to be in free variation with each other. The word order for the comparison relation is Standard-Marker-Adjective. Consider the following examples:

menoko kasuno ainu okirašnu
 (women/comp. marker/men/
 strong) 'men are stronger
 than women'

tampe akkari toampe pirka
 (this thing/comp. marker/
 that thing/good) 'that
 thing is better than this
 thing'

seta kasuno neko pirka
 (dog/comp. marker/cat/good)
 'a cat is better than a
 dog'

6.5.0 Verbs

6.5.1 Verb Inflection for Person

As is the case with nouns, verbs in Ainu are also inflected for person of subject. The inflection, however, differs depending on whether the verb is transitive or intransitive. The following are the inflection paradigms:

Transitive verbs:

| Person | Singular | Plural |
|--------|----------|--------|
| First | či- | či- |
| Second | e- | eči- |
| Third | ∅ | ∅ |

Intransitive verbs:

| Person | Singular | Plural |
|--------|----------|--------|
| First | -as | -as |
| Second | e- | eči- |
| Third | ∅ | ∅ |

6.5.2 Verb Inflection for Number

Although verbs are generally not inflected for number, to clearly indicate plurality, either of subject or object, the affix /-pa/ is added. Consider the following:

| | |
|---------|---------------------------|
| kor | 'to have' |
| kor-pa | '2 (or more) have' |
| kor-pa | 'have 2 (or more) things' |
| mina | 'to laugh (sg.)' |
| mina-pa | 'to laugh (pl.)' |
| sini | 'to rest (sg.)' |
| sini-pa | 'to rest (pl.)' |
| čis | 'to cry (sg.)' |
| čis-pa | 'to cry (pl.)' |

The following verbs form the plural by dropping the final vowel before affixing the /-pa/ affix:

| | |
|----------|---------------------------------|
| hosipi | 'to return (sg.)' |
| hossippa | 'to return (pl.)' |
| turi | 'to stretch something (sg.)' |
| turpa | 'id. (pl.)' |
| kiri | 'to turn something over (sg.)' |
| kirpa | 'id. (pl.)' |
| hetuku | 'to produce/give rise to (sg.)' |
| hetukpa | 'id. (pl.)' |
| situri | 'to extend/lengthen (sg.)' |
| siturpa | 'id. (pl.)' |
| sikiri | 'to turn over (sg.)' |
| sikirpa | 'id. (pl.)' |
| atusa | 'to become naked (sg.)' |
| atuspa | 'id. (pl.)' |

A third, very limited category of verbs maintains a number distinction by affixing /-n/ to the base form for the singular, and /-p/ for the plural. The following seven lexical items comprise the complete set of verbs in this category:

| | |
|-----------|---|
| san/sap | 'to leave to the beach (from a mountain area)' |
| ahun/ahup | 'to enter (from the outside)' |
| asin/asip | 'to go outside (from the inside)' |
| ran/rap | 'to go down (from a high place)' |

| | |
|-------------|---|
| rikin/rikip | 'to go up (from a low place)' |
| makan/makap | 'to go to the mountain area (from the beach)' |
| yan/yap | 'to go onto the land (from the sea)' |

It appears that this preceding category of verbs constitutes a special class, because its members are derived from nominal elements. Consider the following nouns:

| | |
|-----|----------------------|
| aw | 'inside' |
| soy | 'outside' |
| ra | 'low place' |
| rik | 'high place' |
| sa | 'front/beach area' |
| mak | 'back/mountain area' |
| rep | 'open sea' |
| ya | 'land' |

The following verbs have suppletive singular and plural forms:

1. oman 'to go (sg.)'
arpa 'to go (sg.)' (Saru dialect)
paye 'to go (pl.)'
2. ek 'to come (sg.)'
arki 'id. (pl.)'
3. a 'to sit (sg.)'
rok 'to sit (pl.)'
4. as 'to stand (sg.)'
raski 'id. (pl.)'
5. rayke 'to kill one thing'
ronne 'to kill more than one thing'
6. an 'to have (sg.)'
okay 'id. (pl.)'
oka 'id. (pl.)' (Saru dialect)

oma 'to be there (sg.)'
o 'id. (pl.)

6.5.3 Verb Tense

Verbs in Ainu are not inflected for tense.

6.6.0 Adjectives

Adjectives in Ainu are inflected in the same manner as intransitive verbs. Thus, similar to their treatment in the Japanese language, adjectives are considered to be essentially a subclass of the category of verbs.

6.7.0 Pronouns

Personal pronouns form a separate grammatical class in the Ainu language. They are often omitted when such omission does not result in the loss or confusion of semantic information; thus, on the surface, person is frequently indicated only by the personal affix inflection of the verb. Tamura (1970 and 1972) investigated two representative Hokkaido dialects and recorded the following pronoun paradigm:

| Person | Dialect | |
|---------------------|----------|---------|
| | Ishikari | Saru |
| first sg. | ku'áni | káni |
| first exclusive | ci'ókay | cóka |
| first pl. inclusive | anokáy | a'oká |
| first sg. folktales | anokáy | asinúma |
| first pl. | anokáy | a'oká |
| second sg. | e'áni | e'áni |
| second pl. | esokáy | eči'oká |
| second honorific | anokáy | a'oká |
| third sg. | aníhi | sinúma |
| third pl. | okáy | oká |

6.8.0 Sentence and Clause Final Particles

The following particles can occur sentence or clause finally in Ainu⁹:

- 1) /wa/ 'soft narration particle'. This particle strongly resembles, both in form and function, the sentence-final particle

/wa/ in women's speech of Japanese.

e.g., pirka wa 'it's okay'

- 2) /so/ 'now . . . '
e.g., tane karpa so 'now I'll go'
- 3) /ro/ 'let us . . . '; 'how about . . . '
e.g., ipe an ro 'let's eat'
- 4) /nek/ 'I am sure'
e.g., ek tas ki nonkon nek 'he will
come, I am sure'
- 5) /oka/ 'wish'
e.g., cep ruru ta a'e oka 'I wish I
' could eat fish soup'
- 6) /yan/ 'command to more than one'
e.g., te'un arki yan 'you (pl.) come
here!'
- 7) /na/ 'you see'
e.g., ape us na 'the fire is out (and
therefore you should light it again)'
- 8) /ya/ interrogative particle'
e.g., tane karpa yakka pirka ya
(now/I go/even if/good/particle)
'may I go now'
- 9) /un/ 'soft address'
e.g., seta un '(it's) a dog'
- 10) /he/ 'the question is . . . '
e.g., topen uske uyna rusuy kusu he
(sweet/part/get/to want to/be-
cause/particle)
'are they doing so because they
want to get to the sweet part?'

- 11) /an/ 'intensity of emotion'
 e.g., hunna an 'who is that?'
- 12) /tapan/ 'expression of politeness'
 e.g., kukor hapo orowa kanpi ek ruwe
 tapan (my/mother/from/letter/
 come/fact/particle)
 'a letter came from my mother'

6.9.0 Derivations

The following sections contain some of the most common and productive derivations; that is, affixes which relate one class of lexical items to another.

6.9.1 Verb Derivations

6.9.1.1 Causativization

The causative allomorphs are: /-re/, /-te/, and /-ke/:

a) verbs which take /-re/:

| | | | |
|--------|--------------------|----------|--------------------------|
| arpa | 'to go' | arpare | 'to send' |
| hekatu | 'to be born' | hekature | 'to cause to be born' |
| hetuku | 'to grow' | hetukure | 'to make grow' |
| oma | 'to be inside' | omare | 'to put inside' |
| ru | 'to melt' | rure | 'to cause to melt' |
| e | 'to eat' | ere | 'to feed' |
| ku | 'to drink' | kure | 'to make drink' |
| ki | 'to do' | kire | 'to make do' |
| ta | 'to draw water' | tare | 'to cause to draw' |

b) verbs which take /-te/:

| | | | |
|-------|--------------|---------|----------------------|
| aš | 'to stand' | ašte | 'to set up' |
| čiš | 'to cry' | čište | 'to cause to cry' |
| oman | 'to go away' | omande | 'to send away' |
| rikin | 'to ascend' | rikinde | 'to cause to ascend' |

c) verbs which take /-ke/:

| | | | |
|------|----------------|--------|----------------|
| ahun | 'to enter' | ahunge | 'to put in' |
| rai | 'to die' | raige | 'to kill' |
| ran | 'to come down' | range | 'to let down' |
| san | 'to go down' | sange | 'to send down' |
| yan | 'to go up' | yange | 'to take up' |

There is evidence that some double causatives are permissible. Consider the following items:

| | |
|----------|-------------------------|
| ahun | 'to enter' |
| ahunge | 'to send in' |
| ahungere | 'to cause to send in' |
| aš | 'to stand' |
| ašte | 'to set up' |
| aštere | 'to cause to set up' |
| ibe | 'to eat' |
| ibere | 'to feed' |
| iberere | 'to cause to feed' |
| san | 'to go down' |
| sange | 'to send down' |
| sangere | 'to cause to send down' |

Example sentences:

1. kamui / ne yakka / ainu / ne yakka / omau-nu-re /
 (god / both / men / both / flavor-detect-
 / gusu / šomo / e / ruwe / ne na.
 causative / because / neg. / eat / verbal marker /
 conclusion particles)
 'both gods and men were made to recognize
 the flavor by tasting'
2. moyuk raige
 (badger / die-causative)
 '(he) killed a badger'

6.9.1.2 Reflexivization

Reflexivization in Ainu is formed by prefixing the morpheme /yai-/ to the verb. Consider the following examples:

| | |
|---------------|---------------------------------|
| yai-kik | 'to strike oneself' |
| yai-eoripakka | 'to humble oneself' |
| yai-raige | 'to commit suicide' |
| yai-tui | 'to cut oneself' |
| yai-tunaška | 'to hurry oneself' |
| yai-etokoiki | 'to prepare oneself' |
| yai-kannekara | 'to reform oneself' |
| yai-uitek | 'to go to relieve one- self' |

Example sentences:

1. awa, ramačihi yai-kara katu-enei-ani
 (now/soul/reflexive-change/in this way)
 'now, the soul changed itself thus;
2. tambe-gusu šisam yai-kara katu-ne
 (therefore/Japanese/reflexive-change/copulative
 marker)
 'inasmuch as the Japanese changed himself'

6.19.3 Reciprocal Formation

The reciprocal in Ainu is expressed by prefixing the morpheme /u-/ to the verb. Consider the following examples:

| | |
|------------|---------------------------------|
| čiskara | 'to bewail the dead' |
| u-čiskara | 'to weep together for the dead' |
| e | 'to eat' |
| u-e | 'to eat together' |
| ekap | 'to salute' |
| u-ekap | 'to salute one another' |
| keške | 'to persecute' |
| u-keške | 'to persecute one another' |
| pašte | 'to make run' |
| u-pašte | 'to chase one another' |
| ekote | 'to tie up' |
| u-ekote | 'to tie together (as string' |
| erangara | 'to greet' |
| u-erangara | 'to greet each other' |
| emik | 'to bark at' |
| u-emik | 'to bark at each other' |
| ekuba | 'to bite' |
| u-ekuba | 'to bite each other' |

Example sentences:

1. u-kotumi koro u-ronnup ne rure ne
(reciprocal-fight/with/reciprocal-kill/verbal markers)
'they fought together and killed one another'
2. tun newa u-rešpa wa okai ruwe ne
(two people/locative/reciprocal-live/professive/dwell/verbal markers)
'they were living there together'

6.9.1.4 Passivization

Passives in Ainu are expressed by prefixing the morpheme /a-/ to the verb. Consider the following examples:

| | |
|---------|-----------------|
| nu | 'to hear' |
| a-nu | 'to be heard' |
| nuye | 'to write' |
| a-nuye | 'to be written' |
| raige | 'to kill' |
| a-raige | 'to be killed' |

Example sentences:

1. šomo a-e ya
(negative/passive-eat/conclusive emphatic marker)
'you cannot be eaten (said to a fish)'
2. pet otta san wa čep a-nukara
(river/to/descend/progressive/fish/passive-see)
'going down to the river, a fish was seen (by someone)'
3. umma a-o wa oman
(horse/passive-ride/progressive/go)
'he went by horse'
4. čep a-sata-ke otta neyakka a-iwan-ge
(fish/passive-dry-causative/purpose/also/passive-use-causative)
'it is also used for fish to be dried'

6.9.1.5 Derived Verbs¹⁰

a) e + ADJ → Verb

| | | |
|-----------|----------|--------------------------|
| Examples: | harupa | 'soft' |
| | e-hapuru | 'to be unable to endure' |
| | nište | 'hard' |
| | e-nište | 'to be able to endure' |

| | |
|---------|-----------|
| pirka | 'good' |
| e-pirka | 'to gain' |
| wen | 'bad' |
| e-wen | 'to lose' |

b) ADJ + *ka* → Verb

| | | |
|-----------|------------|--------------------|
| Examples: | fure | 'red' |
| | fure-ka | 'to dye red' |
| | moire | 'slow' |
| | moire-ka | 'to slacken speed' |
| | nam | 'cold' |
| | nam-ka | 'to cool' |
| | nisap | 'quick' |
| | nisap-ka | 'to quicken' |
| | nupuru | 'black' |
| | nupuru-ka | 'to blacken' |
| | ramutui | 'frightened' |
| | ramutui-ka | 'to frighten' |
| | retar | 'white' |
| | retar-ka | 'to whiten' |
| | riten | 'soft' |
| | riten-ka | 'to soften' |
| | sarak | 'troubled' |
| | sarak-ka | 'to trouble' |
| | tumsak | 'weak' |
| | tumsak-ka | 'to weaken' |
| | usak | 'dry' |
| | usak-ka | 'to dry' |

6.9.2 Nominalizations

a) $\left\{ \begin{smallmatrix} \text{ADJ} \\ \text{V} \end{smallmatrix} \right\} + i \rightarrow \text{Noun}$

| | | |
|-----------|----------|-------------------|
| Examples: | nupeki | 'bright' |
| | nupeki'i | 'brightness' |
| | oupeka | 'upright' |
| | oupeka'i | 'uprighteousness' |
| | pirka | 'good' |
| | pirka'i | 'goodness' |
| | retar | 'white' |
| | retari | 'whiteness' |
| | wen | 'bad' |
| | weni | 'badness' |
| | ešokor | 'to believe' |
| | ešokori | 'belief' |
| | itak | 'to speak' |
| | itaki | 'speech' |
| | okere | 'to finish' |
| | okere'i | 'the finish' |
| | yainu | 'to think' |
| | yainu'i | 'thought' |

b) $\left\{ \begin{smallmatrix} \text{ADJ} \\ \text{V} \end{smallmatrix} \right\} + p(e) \rightarrow \text{Noun}$

| | | |
|-----------|----------|-----------------|
| Examples: | pase | 'heavy' |
| | pasep | 'a heavy thing' |
| | pirka | 'good' |
| | pirkap | 'a good thing' |
| | poro | 'large' |
| | porop | 'a large thing' |
| | e | 'to eat' |
| | ep | 'food' |
| | ese | 'to answer' |
| | esep | 'an answer' |
| | kotčane | 'to mediate' |
| | kotčanep | 'a mediator' |

| | |
|----------|------------|
| munnuye | 'to sweep' |
| munnuyep | 'a broom' |
| nuye | 'to write' |
| nuyep | 'a pen' |

6.9.3 Adjective Derivations

a) N + o → ADJ 'infestation'

| | | |
|-----------|------------|-------------------------|
| Examples: | ki | 'a louse' |
| | ki-o | 'lousy' |
| | kikiri | 'an insect' |
| | kikiri-o | 'swarming with insects' |
| | oaikanči | 'an earwig' |
| | oaikanči-o | 'swarming with earwigs' |
| | taiki | 'a flea' |
| | taiki-o | 'full of fleas' |
| | uruki | 'a nit' |
| | uruki-o | 'full of nits' |

b) Noun + uš → ADJ

| | | |
|-----------|------------|----------|
| Examples: | ai | 'thorn' |
| | ai-uš | 'thorny' |
| | kem | 'blood' |
| | kem-uš | 'bloody' |
| | koponči | 'dust' |
| | koponči-uš | 'dusty' |
| | kumi | 'mold' |
| | kumi-uš | 'moldy' |
| | numa | 'hair' |
| | numa-uš | 'hairy' |
| | ota | 'sand' |
| | ota-uš | 'sandy' |
| | sippo | 'salt' |
| | sippo-uš | 'salty' |

| | |
|----------|----------|
| šum | 'oil' |
| šum-uš | 'oily' |
| toi | 'earth' |
| toi-uš | 'earthy' |
| upa | 'soot' |
| upa-uš | 'sooty' |
| wakka | 'water' |
| wakka-uš | 'watery' |

Although these above examples seem to indicate that the morpheme /-uš/ has a negative connotation, the following cases do not bear this out:

1. apa-uš kamui 'the god of the doorways'
(lit. 'doory god')
2. abe-uš kamui 'the god of fire'
(lit. 'the fiery god')
3. čup or-uš guru 'the man in the moon'
(lit. 'the moon inny man')
4. sar-uš čikoikip 'an animal with a tail'
(lit. 'a taily animal')

c) N + *sak* → ADJ 'lacking' (privative suffix)

- Examples:
- | | |
|------------|-----------------------------|
| ikkewe-sak | 'unreliable' |
| | (lit. 'without' back-bone') |
| šik-sak | 'blind' |
| | (lit. 'without eyes') |
| tum-sak | 'weak' |
| | (lit. 'without strength') |
| yainu-sak | 'thoughtless' |
| | (lit. 'without thought') |

d) N + *kor* → ADJ 'possessing'

Examples:

| | | |
|--------------|------------------|--------------------------------------|
| haro-kor | 'fat' | (lit. 'possessing fat') |
| hon-kor | 'pregnant' | (lit. 'possessing stomach') |
| ikkewe-kor | 'strong' | (lit. 'possessing backbone') |
| kewtum-kor | 'of strong mind' | (lit. 'possessing mind') |
| pawetok-kor | 'eloquent' | (lit. 'possessing learning') |
| sakanram-kor | 'quarrelsome' | (lit. 'possessing a scolding heart') |

6.9.4 Adverb Derivations

a) ADJ + *no* → ADV

Examples:

| | |
|------------|-------------------------|
| aširi | 'new' |
| ašin-no | 'newly' |
| hošike | 'previous' |
| hošike-no | 'previously' |
| oupeka | 'upright' |
| oupeka-no | 'in an upright fashion' |
| pirka | 'good' |
| pirka-no | 'well' |
| ramu-an | 'wise' |
| ramu-an-no | 'wisely' |

| | |
|-----------|-----------|
| tuima | 'far' |
| tuima-no | 'far' |
| tunaši | 'quick' |
| tunaši-no | 'quickly' |

Sentence examples:

1. tunasi-no paye yan
(quick-adverb/go/imperative)
'go quickly'
2. šine ain moire-no ek
(one/man/late-adverb/came)
'one man came late'

6.10.0 Numerals

The vigesimal nature of the Ainu numeral system has been recognized as early as 1847 by the philologist A. F. Pott and often has been commented upon in the literature concerning the Ainu language.¹¹ Another striking characteristic of the Ainu numeral system is that the numbers one to five are basic as is the number 'ten', whereas the intervening numerals are formed by a process of subtraction from the numeral '10'. The numbers and their formulation are as follows:

- | | | |
|----|-----------------|-------------------|
| 1 | šin | |
| 2 | tu | |
| 3 | re | |
| 4 | ine | |
| 5 | ašikne | |
| 6 | iwan | (i.e., 4 from 10) |
| 7 | arawan | (i.e., 3 from 10) |
| 8 | tupesan | (i.e., 2 from 10) |
| 9 | šinepas | (i.e., 1 from 10) |
| 10 | wan | |
| 11 | šine ikašma wan | (1 plus 10) |
| 12 | tu ikašma wan | (2 plus 10) |
| 13 | re ikašma wan | (3 plus 10) |
| 14 | ine ikašma wan | (4 plus 10) |

| | | |
|-----|-------------------|-------------|
| 15 | ašikne akašma wan | (5 plus 10) |
| 20 | hot(-ne) | |
| 40 | tu hot(-ne) | (2 x 20) |
| 60 | re hot(-ne) | (3 x 20) |
| 80 | ine hot(-ne) | (4 x 20) |
| 100 | ašikne hot(-ne) | (5 x 20) |

The numerals '30', '50', '70', and '90' are formed on the basis of subtraction from the above forms:

| | | |
|----|------------------|--------------------|
| 30 | wan e tu hot | (10 from [2 x 20]) |
| 50 | wan e re hot | (10 from [3 x 20]) |
| 70 | wan e ine hot | (10 from [4 x 20]) |
| 90 | wan e ašikne hot | (10 from [5 x 20]) |

Although traces of a decimal system (as opposed to a vigesimal system) have been recorded for some Kurile dialects, this is presumably a result of the influence of the Russian traders and is not regarded as a native Ainu system.

6.11.0 Sentence Types

6.11.1 Imperative

Imperative verbs are not inflected for person. Consider the following examples:

| | |
|---------------------|------------------------|
| ek | 'come!' |
| ekwa inkar | 'come and see!' |
| en-nure | 'listen to me!' |
| arpa wa inkar wa ek | 'go and see and come!' |

Although verbs stems without a special imperative marker may have imperative force, the morphemes *hani* (*kane* in Karafuto) may follow to emphasize the imperative:

| | |
|------------|---------|
| ek hani | 'come!' |
| inkar hani | 'look!' |

Plural imperative is formed by the morpheme *yan* immediately following the verb:

| | |
|-----------|---------------|
| inkar yan | 'look!' (pl.) |
|-----------|---------------|

The morpheme *yan* also expresses politeness, and may be used in either a plural or singular context. Consider the following examples:

| | |
|----------------|----------------------------------|
| arki yan | 'welcome!' |
| rok yan | 'sit down (honorific)!' |
| inkar yan | '(you-sg.) look (honorific)!' |
| inkar yan hani | '(you-pl.) look (honorific)!' |

To express first person plural propositions, the particle *ro* is attached:

| | |
|---------------|--------------------|
| paye-an ro | 'let's go' |
| a-nukan ro | 'let's look at it' |
| inkar-an ro | 'let's sightsee' |
| hopumpa-an ro | 'let's get up' |
| mokor-an ro | 'let's rest' |

6.11.2 Negative

The negative morpheme *somo*~*šomo* immediately precedes the verb or adjective. Consider the following examples:

| | |
|---------------------------|--|
| somo ek | 'doesn't come' |
| somo oman | 'doesn't go' |
| šomo pirka | 'not good' |
| tampako anakne šomo ku-ku | '(I) don't smoke tobacco' (<i>anakne</i> 'emphatic marker') |

In the Karafuto dialects, *ham* (in free variation with *hane*) functions as the negative morpheme:

| | |
|--------------|----------------|
| ham či-wante | 'I don't know' |
| hane auwante | 'id.' |

In the case of negative imperatives, the morpheme *itek* (also *iteki*) appears preceding the verb. In Karafuto, *hanke* (also *hanka*) is the negative-imperative morpheme. Consider the following examples:

| | |
|---------------------|--------------------------|
| iteki iku | 'never drink liquor!' |
| itek čiš | 'don't cry!' |
| itek čiš yan | 'don't cry (honorific)!' |
| hanka čiš hanka čiš | 'don't cry, don't cry!' |

6.11.3 Interrogative

All sentences in Ainu may be made interrogative by the use of rising intonation. In addition to this device, the morphemes *ya* and *he* function as interrogative markers. Consider the following examples:

| | |
|---------------------|------------------------------|
| eči-ye ya | 'did she say it?' |
| e-korpe he | 'is it her thing?' |
| pirkpe he, wenpe he | 'a rich man, or a poor man?' |
| tampe he, toampe he | 'this one or that one?' |

The following are a list of interrogative words with an example for each case:

1. humna 'who'
humna eči-ne ya 'who is she?'
2. hemanta 'what'
hemanta eči-nu rusui ya
'what does she want to hear?'
3. hunak(ta) 'where'
hunak ta an ruwe 'where is it?'
hunak pak earpa 'up to where
is she going?'

4. makan 'what sort of'
 makan kat korpe 'what sort of
 shape did it
 have?'
5. inan-pe 'which'
 inan-pe pirka 'which is good?'
6. inanike 'which (of two)'
 inanike pirka 'which (of two)
 is better?'
7. hempar 'when'
 hempar e-arpa 'when is she
 going?'
8. hempak 'how many'
 hempak an 'how many are there?'

NOTES

1. The importance of the folktale is observed to occur as a common trait among many of the Paleo-Asiatic tribes. One explanation for this would be that engaging in these tales is an ideal way to pass the time during a dreary and prolonged winter.
2. Kindaichi (1960:303-307)
3. Chiri (1952:125) labels this voicing process as 'Japanized Ainu' (*wajinka shita ainu*). This term is inappropriate for two reasons. First, it implies that such voicing is a result of the influence of the Japanese language, an assertion that is totally false. Voicing has been noted for all dialects of Ainu, even the Kurile dialect which had had little contact with the Japanese. The second reason this term is inappropriate is that it suggests that the voicing process in the Ainu language is identical to the '*rendaku*' or sequential voicing of Japanese. Voicing in Ainu is a completely productive process: consonants may become voiced intervocally or after voiced obstruents. Japanese *rendaku*, on the other hand, is a very

limited process which occurs obligatorily only to those morphemes lexically marked as undergoing this process. Furthermore, voiced consonants are already in the phonemic inventory of Modern Japanese, but they appear only allophonically in Ainu.

4. Example from Peng (1969-70:96).
5. Tamura (1972:46).
6. This gives justification for Chiri's (1952) treatment of diphthongs as closed syllables, and thus their orthographic representation as /aw/, /uy/, /ey/, etc. If these were open syllables, the nominalizer would be /-p/, but instead, /-pe/ is affixed to the stems ending in these diphthongs.
7. This constitutes further evidence for the allophonic status of the vowel off-glide in [r^a] (section 6.2.3). If 'white' were phonemically /retara/, that is, ending in an open syllable, the expected shape of the nominalizer morpheme would be /-pe/, yielding the unacceptable *[retarape].
8. In Ishikari, Tokachi, Kushiro, Kitami, Teshio, and the Karafuto dialects, /an-/ as opposed to /a-/ is the first person morpheme.
9. Data from Fukuda (1961).
10. Note that section 6.6.0 stated that adjectives are inflected in the same manner as verbs and are therefore considered to be a subclass of verbs. It is therefore technically incorrect to have a rule that derives verbs from adjectives as there appears to be no distinction between the two categories. The rules have been formalized, however, in such a manner so as to agree with the terminology used by Chiri and Kindaichi.
11. Laufer (1917:192).

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Index of Ainu Forms

| | |
|------------------------------|-------------------|
| ak 'younger brother' | 2.14.1.2; 4.21.1 |
| akka 'water' | 4.17.2 |
| am 'finger/toe nail' | 4.14.3 |
| amam 'rice/cereal grain' | 2.14.1.8; 4.21.7 |
| amani 'beam of wood, rafter' | 4.21.10 |
| ampa 'to carry' | 4.21.12 |
| apa 'doorway' | 2.14.1.3; 4.21.8 |
| apa 'relative' | 2.14.1.7; 4.21.11 |
| apapu 'to apologize' | 4.17.4 |
| apo 'mother' | 2.14.1.5 |
| apto 'rain' | 4.21.5 |
| ar- 'one side/part of' | 2.14.1.1 |
| ar 'that (over there)' | 2.14.1.4 |
| ara 'to be pretty' | 4.21.2 |
| araka 'to fall ill' | 4.21.3 |
| aram 'lizard' | 4.1.22 |
| assap 'oar, paddle' | 4.21.9 |
| atu 'vomit' | 4.21.4 |
| ay arrow' | 2.5.9 |
| ča 'seashore, riverbank' | 2.7.18 |
| caake 'edge, border' | 2.8.8 |
| čača 'old person' | 2.8.9 |
| čaipuni 'large boat' | 4.7.3 |
| caki 'diarrhea' | 4.4.6 |
| časi 'fence, wall' | 4.7.2 |
| ci 'penis' | 2.8.4; 4.5.2 |
| ci 'ripe, grow ripe' | 2.8.6 |
| či- 'wild, untamed' | 4.7.1 |
| ciire 'to roast, broil' | 2.7.19 |
| cik 'time, when' | 2.8.5; 4.5.3 |
| cikoykip 'beast' | 2.2.12 |
| čima 'boil, eruption' | 2.8.1 |
| cip 'boat' | 2.2.11 |
| cisurap '3 yr. old bear' | 4.9.12 |

| | |
|-------------------------------|------------------|
| čiw 'river current' | 2.8.3; 4.5.4 |
| čotca 'to sting' | 4.7.4 |
| čuk 'autumn' | 2.8.7; 4.5.1 |
| e 'to eat' | 2.5.7 |
| ek 'to come' | 2.14.4.4 |
| ekai 'round' | 4.22.1 |
| ekaši 'old man, ancient' | 2.14.4.3 |
| ema 'garbage' | 2.5.8; 4.20.8 |
| ene 'somewhere' | 4.22.4 |
| epara 'to condemn, injure' | 2.14.4.1 |
| ererašuye 'to totter, shake' | 4.22.3 |
| etomočine 'stupid' | 4.22.2 |
| ewara 'to fan' | 2.5.5 |
| ha 'empty' | 4.14.1 |
| hacikonkon 'spider' | 4.13.11 |
| hai 'large leafed nettle' | 4.11.3 |
| ham 'not' | 2.14.1.6; 4.21.6 |
| hanko 'navel, umbilical cord' | 4.11.4 |
| hapo 'mother' | 2.14.1.5 |
| hariyam 'lizard' | 4.1.22 |
| harm 'lizard' | 4.1.22 |
| haro 'fat (adj.)' | 4.11.1 |
| her 'beam of light' | 2.6.1 |
| ho 'anus, vagina' | 4.1.3 |
| hočaki 'diarrhea' | 4.4.6 |
| hok 'to buy' | 4.11.2 |
| hoš 'leggings' | 2.1.9; 4.1.12 |
| hu 'fresh' | 2.1.10; 4.1.21 |
| hui 'inside fat of animals' | 2.6.2 |
| hura 'smell' | 4.14.2 |
| hure 'red' | 2.1.8; 4.1.15 |
| -i 'nominalizer' | 4.23.1 |
| i- 'four' | 2.5.4; 4.20.1 |
| ipe 'to eat (trans.)' | 4.20.9 |
| iro 'color' | 2.5.2 |
| isepo 'rabbit' | 2.13.1 |

| | |
|----------------------------|-----------------|
| itako 'female shaman' | 2.14.2.1 |
| iunin 'to be sick' | 2.14.4.2 |
| iwor 'cave' | 2.15.1 |
| iyē 'to speak, say' | 4.23.2 |
| kačiu 'to spear, pierce' | 4.13.7 |
| kam 'muscle' | 2.3.11; 4.13.21 |
| kamu 'to cover' | 4.13.9 |
| kamui 'God' | 4.13.6 |
| kap 'skin, bark' | 2.3.12; 4.13.2 |
| kapke 'flat' | 2.3.14 |
| kar 'family' | 2.3.9; 4.13.5 |
| kar 'to peel/drill fire' | 2.3.13; 4.13.22 |
| kar 'type of elm tree' | 4.13.15 |
| kararak 'type of crow' | 2.3.15; 4.13.12 |
| kasu 'ladle' | 2.3.10; 4.13.20 |
| kema 'foot' | 2.3.4; 4.13.17 |
| ker 'shoe' | 4.13.18 |
| kere 'divided, split' | 2.3.7; 4.13.28 |
| kero 'sea urchin' | 4.13.14 |
| kes 'end, edge' | 2.3.6; 4.13.25 |
| kewe 'to expel, drive out' | 2.3.8 |
| kewre 'to shave, whittle' | 2.3.5; 4.13.19 |
| ki 'to do (trans.)' | 2.3.3 |
| kina 'grasses/herbs' | 4.13.26 |
| kir 'fat' | 2.3.1; 4.13.13 |
| kisma 'to press down on' | 2.3.2 |
| ko 'counter for days' | 4.13.8 |
| kom 'knuckles, knot' | 4.13.27 |
| koro 'while, when' | 2.3.16; 4.13.3 |
| kosina 'to fasten, tie to' | 2.3.17 |
| kotan 'village, town' | 2.3.18; 4.13.24 |
| kumi 'mold, mildew' | 4.13.1 |
| kur 'dark, black, shadow' | 2.3.21; 4.13.4 |
| kusu 'because' | 4.13.10 |
| kut 'throat' | 2.3.20; 4.13.23 |
| kut 'a girdle' | 2.3.22 |

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| kuy 'to chew' | 2.3.19; 4.13.16 |
| mak 'to withdraw, go back' | 4.15.8 |
| manka 'strong' | 2.10.5; 4.15.10 |
| mat 'woman, female' | 4.15.5 |
| mempiro 'wild onion' | 2.10.2; 4.15.6 |
| mempiru 'wild onion' | 2.10.2; 4.15.6 |
| mena 'pond, lake' | 4.15.15 |
| menas 'southern/eastern wind' | 4.15.13 |
| meri 'twinkle, flash of light' | 2.10.3 |
| mi 'to wear' | 2.11.1 |
| mim 'flesh of fish' | 2.10.1; 4.15.11 |
| minowa 'rims of hills' | 4.15.14 |
| mo 'gentle, peaceful' | 2.11.4; 4.18.11 |
| mo- 'water' | 2.10.4; 4.15.1 |
| mori 'little hill, slope' | 4.15.16 |
| moro 'house' | 2.10.6; 4.15.2 |
| mose 'nettle' | 4.15.12 |
| mui 'to tie, wrap, bundle' | 4.15.4 |
| mui 'winnow (n.)' | 4.15.17 |
| muk 'stopped up, bunged up' | 4.15.9 |
| mun 'drop of water, ball' | 2.10.7; 4.15.3 |
| mure 'a pair' | 4.15.7 |
| na 'also, again' | 4.18.4 |
| nai 'river, mountain stream' | 4.18.3 |
| nam 'fresh, cool' | 4.18.13 |
| ne 'becomes, is' | 4.18.6 |
| ni 'to suck, sip' | 2.11.6; 4.18.14 |
| ni 'tooth' | 4.18.2 |
| ni 'tree' | 4.18.8 |
| ni 'counter for persons' | 2.11.2; 4.18.9 |
| niu 'counter for persons' | 2.11.2; 4.18.9 |
| nikax 'to go bad, turn sour' | 2.12.2; 4.18.15 |
| noma 'morass, swamp' | 2.11.5; 4.18.1 |
| nomi 'ceremony, to worship' | 4.18.16 |
| no(ye) 'to twist' | 2.11.3; 4.18.12 |
| nu 'eye' | 2.12.1; 4.18.7 |

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| numa 'hair' | 2.11.7 |
| numa 'morass, swamp' | 2.11.5; 4.18.1 |
| nup 'high' | 4.18.5 |
| nuy 'flame' | 2.11.8; 4.18.10 |
| o 'to bore, to open' | 4.24.2 |
| oa- 'very' | 4.16.3 |
| -ocis 'to get angry' | 2.8.2 |
| ociw 'to have sexual intercourse' | 2.14.5.1 |
| oheuge 'crooked, bent' | 2.4.4 |
| ohoge 'crooked, bent' | 2.4.4 |
| ok 'angry' | 4.24.1 |
| ok 'neck, nape of neck' | 2.4.3; 4.16.1 |
| om 'thigh' | 2.14.5.3 |
| opas 'snow' | 2.14.3.1 |
| oro 'from' | 4.24.3 |
| osa 'sand' | 4.16.4 |
| osopo 'rabbit' | 2.13.1 |
| ota 'sand' | 4.16.4 |
| otakina 'kind of plant' | 2.14.5.2 |
| paki 'time' | 4.1.1 |
| par 'mouth' | 4.1.23 |
| para 'palm of hand' | 2.1.1; 4.1.18 |
| pas 'to run' | 4.1.2 |
| patče 'to fly about, explode' | 4.8.2 |
| pa(ye) 'to go, proceed' | 4.1.19 |
| -p(e) 'thing' | 4.1.16 |
| peker 'to be bright' | 4.1.11 |
| pi 'animal fat' | 4.8.1 |
| pi 'seed, kernel' | 4.1.17 |
| pira 'cliff' | 4.1.13 |
| pira 'open spread out (adj.)' | 4.1.14 |
| piri 'eddy of water' | 2.1.6 |
| pirka 'good (not bad)' | 2.1.4 |
| piru 'to wipe' | 2.1.5 |
| piyapa 'water oats' | 4.1.9 |
| po 'child, diminutive marker' | 4.1.8 |

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| poka 'by some means, somehow' | 4.1.20 |
| pone 'bone' | 4.1.7 |
| poro 'large' | 4.1.10 |
| ra 'blade of grass' | 4.2.1 |
| ra 'below, under' | 4.2.19 |
| rak 'smell of' | 4.2.20 |
| ram 'heart, mind, feelings' | 4.19.2 |
| rap 'feathers' | 4.2.7 |
| rar 'edge of sword guard' | 4.2.8 |
| rara 'naked' | 4.2.9 |
| rara 'make fun of, mock' | 4.2.10 |
| rari 'press down on' | 4.2.11 |
| ras 'to chip, break off' | 4.2.12 |
| rasu 'to join rafters' | 4.2.23 |
| rat 'to feel disappointed' | 4.2.21 |
| ratpo 'a bunch' | 4.2.13 |
| rek 'beard' | 4.2.5 |
| rek 'to play an instrument' | 4.2.6 |
| rera 'wind' | 4.2.14 |
| retar 'white' | 4.2.22 |
| reye 'to creep, crawl' | 4.2.15 |
| ri 'high' | 4.2.18 |
| rit 'sinew, tendons' | 4.2.3 |
| -ro '1st person hortative' | 4.19.3 |
| rori 'head of water current' | 4.2.17 |
| ru 'ice' | 4.2.4 |
| rur 'sea' | 4.2.16 |
| rutke 'to take up the cause' | 4.19.1 |
| rue 'thick, large' | 4.2.2 |
| ruye 'thick, large' | 4.2.2 |
| sa 'seashore, riverbank' | 2.7.18 |
| sa 'space, interval' | 2.7.16; 4.9.8 |
| sai 'flight of birds' | 4.9.17 |
| sama 'to lie along' | 4.10.1 |
| samampe 'flatfish, turbot' | 4.9.4 |

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|--------------------------------|----------------|
| sapke 'to taste' | 4.10.2 |
| sar 'tail' | 4.10.5 |
| saye 'coil of rope' | 2.7.17; 4.9.10 |
| se 'to carry on the back' | 2.7.14; 4.10.3 |
| ser 'to catch the breath' | 4.12.1 |
| serema 'guardian' | 2.7.15; 4.9.14 |
| sešmau '4 year old buck' | 2.7.20; 4.9.15 |
| si- 'true, very, great' | 4.9.18 |
| si 'fecal matter, dung' | 2.7.11 |
| sik 'eye (n.)' | 2.7.8 |
| šikai 'peg, pin' | 2.7.7 |
| sikes- 'to ill treat, scold' | 2.7.6; 4.9.16 |
| sime 'to dye' | 4.9.5 |
| šipi 'to refine' | 2.7.5 |
| sippo 'salt brine' | 2.7.10; 4.9.7 |
| sir 'earth' | 2.7.1 |
| sir 'weather' | 4.10.7 |
| sirar 'the tide' | 4.12.2 |
| širen 'to lead away, entice' | 4.10.6 |
| siri 'instead of, in place of' | 2.7.4; 4.9.13 |
| široť-ke 'to stick, pierce' | 2.7.2 |
| siru 'to polish' | 2.7.3; 4.9.6 |
| šiški 'urinate' | 2.7.9 |
| siw 'to be bitter tasting' | 4.9.2 |
| sok 'breathe (out)' | 4.9.3 |
| sorma 'edible fern' | 4.10.4 |
| soya 'bee' | 4.9.9 |
| -su- '3' | 4.9.12 |
| sum 'oil' | 2.7.13 |
| sunke 'a lie, falsehood' | 2.7.12 |
| sus 'to bathe' | 4.9.1 |
| susu 'willow' | 4.9.11 |
| ta 'locative marker' | 3.3.1; 4.3.5 |
| tak 'short' | 4.4.7 |
| tanku '100' | 2.2.10 |

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|-----------------------------|------------------|
| tar 'plural marker' | 4.3.2 |
| tara 'bare' | 2.2.9 |
| tara 'a dream' | 4.4.9 |
| tara 'an appendage' | 4.3.1 |
| te 'locative marker' | 3.3.1; 4.3.5 |
| teine 'to get damp, wet' | 4.4.8 |
| tek 'hands' | 4.3.12 |
| tem 'the arms' | 2.2.7; 4.3.7 |
| teur 'entrails of fish' | 2.2.8 |
| to 'breast' | 2.5.3; 4.4.2 |
| to 'lake' | 2.2.5; 4.3.11 |
| to 'that' | 4.4.4 |
| tok 'to peck' | 2.2.6; 4.4.3 |
| tok 'to jump, project' | 2.2.2; 4.3.8 |
| top 'bamboo' | 2.2.3 |
| topse 'to spit' | 4.3.4 |
| toy 'earth' | 2.2.4; 4.3.9 |
| tuk 'to jump, project' | 2.2.2; 4.3.8 |
| tu 'verbal intensifier' | 4.4.5 |
| tum 'strength' | 4.4.10 |
| tupse 'to spit' | 4.3.4 |
| tura 'with, accompanying' | 2.5.10; 4.3.3 |
| turu 'dirt, ear wax' | 4.3.6 |
| tus 'rope' | 4.4.1 |
| tuš 'animal pelt' | 2.2.1; 4.3.10 |
| u- 'no, not' | 4.16.2 |
| u- 'reciprocal marker' | 4.25.1 |
| uk 'to take, accept' | 4.25.2 |
| uku 'to blow with the lips' | 2.1.11; 4.1.5 |
| um- 'to tire' | 2.14.3.4; 4.25.4 |
| una 'ashes' | 2.1.14 |
| unci 'fire' | 2.1.13; 4.1.4 |
| uok 'to fasten, wrestle' | 2.4.5 |
| upas 'snow' | 2.14.3.1 |
| ur 'furcoat' | 2.1.16 |

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|--------------------------------|------------------|
| ur 'hill | 2.1.17 |
| ura 'damp place' | 2.4.2 |
| uray 'stake for catching fish' | 2.1.15 |
| ure 'to bury, cover up' | 2.4.1 |
| ure 'foot (human)' | 2.1.12 |
| ut 'rib' | 2.14.3.2 |
| uta 'to tap, beat' | 4.25.3 |
| utakararip 'starfish' | 2.14.3.6; 4.25.5 |
| utar 'plural marker' | 4.3.2 |
| uto 'door' | 2.14.3.5 |
| uyna 'ashes' | 2.1.14 |
| wakka 'water' | 4.17.2 |
| wa(n) 'ten' | 4.16.5 |
| wara 'youngest' | 4.17.1 |
| wen 'bad, evil' | 4.17.3 |
| wor 'water' | 4.16.6 |
| ya 'interrogative marker' | 2.9.1 |
| ya 'net' | 4.20.3 |
| ya 'land (not sea)' | 4.20.2 |
| yak 'interjection' | 4.6.1 |
| yaku 'tribute, tax' | 4.6.5 |
| yap 'to ascend (pl.)' | 2.9.2 |
| yar 'bark of trees' | 4.20.4 |
| yar 'to tear, to rend' | 4.6.2 |
| yara 'to do through another' | 2.5.1 |
| yarui-čup 'August' | 4.20.7 |
| yašitoma 'to be ashamed' | 4.20.5 |
| ye 'to say, speak' | 4.23.2 |
| yom 'to shrink' | 4.6.3 |
| yorun 'to beg' | 4.6.4 |
| yu 'sulphur springs' | 4.20.6 |
| yuk 'deer' | 2.5.6 |

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